THE UNIVERSITY OF NORTH CAROLINA SYSTEM

New Academic Degree Program Request to Establish

Institution ____University of North Carolina at Charlotte_____

Degree Program Title (e.g., M.A. in Biology) _____B.S. in Artificial Intelligence_____

Reviewed and Approved By (Provide Name and title only. No signature required in this section.)

Review	Name	Title
Faculty Senate Chair (Or appropriate body)	Xiaoxia Newton	Faculty Council President
Graduate Council (If applicable)	NA	NA
Graduate/Undergraduate Dean (If applicable)	NA	NA
Academic College/School Dean	Bojan Cukic	Dean College of Computing and Informatics (CCI)
Department Head/Chair	Min Shin	Department Chair for Computer Science
Program Director/Coordinator	Harini Ramaprasad	CCI Associate Dean, Undergraduate Programs and Student Success

New Academic Program Process

New academic programs are initiated and developed by faculty members. The Request to Establish a New Academic Degree Program must be reviewed and approved by the appropriate individuals listed above before submission to the UNC System Office for review.

Please provide a succinct, yet thorough response to each section. Obtain signatures from the Chancellor, Provost, and Chief Financial Officer, and submit the proposal via the PREP system to the UNC System Vice President for Academic Program, Faculty, and Research, for review and approval by the UNC System Office. If the Request to Establish is approved by UNC System Office staff, it will be submitted for review and approval by the UNC Board of Governors.

UNC Institution Name	University of North Carolina at Charlotte
Institutional Accreditor (e.g., SACSCOC)	SACSCOC
Joint Degree Program (Yes or No)? If so, list partner.	No
Degree Program Title (e.g., M.A. in Biology)	BS in Artificial Intelligence
CIP Code and CIP Title (May be found at National Center for Education Statistics)	11.0102
Require UNC Teacher Licensure Specialty Area Code (Yes or No). If yes, list suggested UNC Specialty Area Code(s).	No
Proposed Delivery Mode (campus, online, or site-based distance education). Add maximum % online, if applicable.	Campus
Will this program be offered by an outside provider such as an Online Program Manager (OPM) or Project Kitty Hawk (PKH)? If yes, list the provider.	No
If requesting site-based delivery, indicate address(es), city, county, state, and maximum % offered at site.	N/A
Proposed Term to Enroll First Students (e.g., Fall 2023)	Fall 2026

Do the following sections of your previously submitted and approved Request for Preliminary Authorization to Develop a New Academic Degree Program document require any change or updated information? If yes, note the items and explain.

Category	Yes or No	Explanation (if applicable)
Accreditor Liaison Statement	No	
Review Status (campus bodies that reviewed and commented on Letter of Intent)	No	
Program Summary	No	
Student Demand	No	

Access and Affordability	No	
Societal and Labor Market Demand	No	
Doctoral Specific Questions	NA	NA

I. Program Summary

a. Describe the proposed program, including the overall rationale for its development. Include a discussion of how this program supports the specific mission of the institution and of the broader UNC System. Why is this program a necessary addition for the institution?

Program Description
The Bachelor of Science in Artificial Intelligence is designed for students aiming to build skills for a range of careers in AI and machine learning. Graduates with this degree will gain comprehensive training in core mathematics, computing, AI algorithms, the AI software lifecycle, and ethical considerations, while also building strong communication and teamwork abilities through practical, hands-on learning. The program offers built-in flexibility, allowing students to explore courses in other disciplines and apply AI across diverse fields.

Rationale for Development:

- **Employer Demand:** Favorable employer demand indicates ample opportunities for program graduates in statewide and regional labor markets. EAB identified 6,508 statewide and 28,224 regional AI-related job postings between February 2024 and January 2025.[1]
- **Industry Growth**: Generative AI job postings have increased significantly. Software development demand is rising due to AI integration, and data scientists and machine learning engineers are becoming critical. AI skills are essential in cybersecurity, IT infrastructure, and digital transformation, with healthcare and finance experiencing a surge in AI-driven automation and innovation.[2]
- **Student Interest**: Existing AI-related programs, such as the BS in Computer Science with a concentration in “AI, Robotics, and Gaming” and AI-related courses demonstrate strong and sustained student interest. See Appendix C.
- **Statewide Educational Gap:** A Bachelor of Science in Artificial Intelligence is needed to fill a critical gap in the state’s higher education offerings, as no institutions currently provide a dedicated undergraduate AI degree to meet growing industry demand.

Support for the Institution's Mission:

- The program aligns with the university’s mission as a leading urban research institution with a substantial local-to-global impact. It prepares students to address real-world challenges with AI expertise through accessible and affordable education.[3]
- UNC Charlotte has made significant contributions to AI research, including advancements in AI and mixed reality, natural language processing, computer vision, machine learning, neural engineering, and computer intelligence for predictive health and environmental risk analysis.[4]

[1] EAB. (2025, February). Market pulsecheck for a bachelor's-level artificial intelligence program. See Request for Preliminary Authorization for the full study.

[2] Bureau of Labor Statistics, “Industry and Occupational Employment Projections Overview and Highlights, 2023–33,” Monthly Labor Review, U.S. Department of Labor, 2024, https://www.bls.gov/opub/mlr/2024/article/industry-and-occupational-employment-projections-overview-and-highlights-2023-33.htm.

[3] UNC Charlotte, "About Us," UNC Charlotte, accessed February 28, 2025, https://www.charlotte.edu/landing/about-us

[4] UNC Charlotte College of Computing and Informatics, "CCI Research Areas," UNC Charlotte, accessed February 28, 2025, https://cci.charlotte.edu/cci-

Support for the UNC System's Mission:

- The program supports the UNC System's mission, emphasizing education, research, and public service for all North Carolinians.
- Labor market projections indicate a rise in AI-related job opportunities across North Carolina in industries such as healthcare, finance, cybersecurity, and transportation.
- UNC Charlotte will play a crucial role in the state's workforce development by offering this program.
- The program will create opportunities for collaboration with other UNC institutions, specifically the developing AI program at NC A&T University, fostering research and shared resources in AI innovation.

Program's Necessity for the Institution:

- The College of Computing and Informatics at UNC Charlotte offers established programs in bioinformatics, data science, and cybersecurity—fields that are rapidly being transformed by AI applications necessitating a more focused and streamlined AI degree program.
    - UNC Charlotte is uniquely positioned to offer a distinct AI degree, building on its recognition as the UNC system's only university currently offering a Graduate Certificate in Applied Artificial Intelligence.
    - UNC Charlotte is well-equipped to provide an undergraduate AI program focused on applied learning, real-world problem-solving, cross-disciplinary collaboration, and hands-on experiences.
    - UNC Charlotte offers affordable tuition for NC residents and an opportunity for flexibility, allowing students to select courses from various cutting-edge AI course clusters. Additionally, the program is supported by one of the largest computing colleges in the nation.

b. What are the key objectives of the program? What are the expected benefits for the student who graduates from the program? What are the expected public benefits (at the local, regional, state, or national level) of this program?

Key Objectives of the Program:

- Graduates will be able to communicate technical material effectively to both technical and non-technical audiences.
- Graduates will be able to evaluate the ethical implications of applied AI.
- Upon completing the computing core, students will master the core concepts of computer science, with emphasis on demonstrations of programming and use of data structures.
- Graduates will be able to explain and evaluate how databases support AI-driven applications.
- Graduates will be able to develop and apply machine learning models, extract meaning, automate analysis and decision-making.

Expected Benefits for Graduates:

- Graduates will acquire competitive skills and job-ready expertise, ensuring they are well-prepared for roles in emerging industries.
- The program incorporates real-world case studies and explores AI-related ethical topics, providing a strong foundation of theoretical and analytical skills.
- Graduates will be well-positioned for careers in AI, data science, and machine learning across multiple sectors, including finance, consulting, technology, and energy.
- Located in the rapidly growing city of Charlotte, NC, the program will cultivate strong industry partnerships with leading employers—Lowe's, Bank of America, Ally, Duke Energy, and others—preparing graduates with the skills needed for real-world AI applications.

research-areas/.

- A dedicated AI degree program at UNC Charlotte will equip students with the specialized skills needed to meet evolving workforce demands.

Expected Public Benefits:
Economic Impact and Community Engagement.

- The AI field is projected to contribute significantly to job creation and economic growth.
- Located in Charlotte, a major economic hub, the program will strengthen the local and state economy by producing AI professionals who meet workforce demands and support the region's growing industries.
- The program supports AI research, enabling faculty and students to engage in discoveries that advance AI applications in various areas. These areas include AI and mixed reality, natural language processing, computer vision, neural engineering, cybersecurity, and computer intelligence for predictive health and environmental risk analysis.
- The program addresses North Carolina's need to drive progress by meeting the demand for AI jobs. Employment in occupations related to AI is projected to increase faster than average between 2025 and 2035.[5]

II. Program Planning and Unnecessary Duplication:

a. List all other public and private four-year institutions of higher education in North Carolina currently operating programs similar to the proposed new degree program, including their mode of delivery (use the 4-digit CIP as a guide). Show a four-year history of applications, acceptances, enrollments, and degrees awarded in similar programs offered at other UNC institutions (using the format below for each institution with a similar program). If data was not available, mark not available. Programs at UNC institutions may be found on the UNC System website.

There are no currently active BS in Artificial Intelligence in the NC System. NC A&T University has begun the process of establishing an undergraduate program in Artificial Intelligence, CIP 11.0102; however, it is not yet active. While no degree programs with the same CIP exist, East Carolina University offers a Post Baccalaureate Certificate in "Intelligent Systems."[6] NC State offers online credentials through their AI Academy[7] and an Artificial Intelligence concentration in their BS in Computer Science program. UNC at Chapel Hill students conduct research through the AI Project. UNC Greensboro offers a graduate certificate in Generative AI for Business through their Bryan School of Business and Economics.[8] While interest in AI-related education and training is evident throughout the NC System, they do not fill the educational gap left by the absence of a dedicated undergraduate degree program.

b. Describe what was learned in consultation with other programs regarding their experience with student demand and job placement. Indicate how their experiences influenced your enrollment projections.

[5] EAB. (2025, February). Market pulsecheck for a bachelor's-level artificial intelligence program. See Request for Preliminary Authorization for the full study.

[6] ECU, "Graduate Certificates." *Department of Computer Science,* accessed February 28, 2025. https://cet.ecu.edu/csci/graduate-programs/graduate-programs/

[7] NC State University. "Join the Artificial Intelligence Academy." NC State Artificial Intelligence Academy. Accessed February 28, 2025. https://ai-academy.ncsu.edu/join-the-artificial-intelligence-academy/.

[8] University of North Carolina at Greensboro. "Graduate Certificate in Generative AI for Business." *Bryan School of Business and Economics*, accessed February 28, 2025. https://bryan.uncg.edu/programs/certificates/graduate-certificate-in-generative-ai-for-business/.

UNC Charlotte's College of Computing and Informatics Dean spoke with Kaushik Roy, Chair of the Department of Computer Science at North Carolina A&T University regarding their experience with the development of a BS Artificial Intelligence (AI) program. Approved by the UNC System Board of Governors in 2024, NC A&T's BS in AI was set for a Fall 2025 launch but the timeline shifted and may now align with UNC Charlotte's launch in Fall 2026 or later. While other universities offer AI concentrations within computer science degrees, these will be the only stand-alone AI bachelor's programs in the state.

The favorable employer demand in both statewide and regional labor markets supports both programs. From February 2024 to January 2025, employers posted 6,508 statewide and 28,224 regional AI-related job openings. While both programs serve different student needs, UNC Charlotte's annual output of over 600 computer science (CIP 11.0701) graduates, in addition to NC A&T's 40–70, highlights the necessity of establishing both programs to meet the escalating demands of the field. Labor market analysis supports UNC Charlotte's enrollment projections, confirming ample demand for both programs.

c. Identify opportunities for collaboration with institutions offering related degrees and discuss what steps have been or will be taken to actively pursue those opportunities where appropriate and advantageous.

Opportunities for collaboration with NC A&T have been identified and discussed, primarily by discussing experiences and opportunities for program improvements. Establishing a pipeline for those interested in pursuing graduate study is another opportunity. UNC Charlotte's MS degrees in Computer Science, IT, Cybersecurity, Data Science and Business Analytics, and its proposed MS in AI may provide NC A&T graduates opportunities to further their education.

d. Present documentation that the establishment of this program would not create unnecessary program duplication. In cases where other UNC institutions provided similar online, site-based distance education, or off-campus programs, directly address how the proposed program meets unmet need.

There is no other *established* AI undergraduate program (CIP 11.0102) in the UNC System.

Unmet Need: UNC Charlotte is uniquely positioned to offer a distinct AI degree. UNC Charlotte is well-equipped to provide an undergraduate AI program focused on applied learning, real-world problem-solving, cross-disciplinary collaboration, and hands-on experiences. The College of Computing and Informatics will have over 50 faculty members with expertise in AI-related teaching and research areas such as: cybersecurity, robotics & gaming, machine learning, and data science.

Complementary Programs: While NC A&T will also offer a BS in AI, the strong demand and rapid growth of the AI sector indicate that both programs can thrive without unnecessary duplication. UNC Charlotte is situated in one of North Carolina's largest cities, providing access to a wide array of employers and industries. The school's size, R1 status, and relationships with Bank of America, Ally, Duke Energy, Lowe's, and more, can facilitate program development and expansion. Establishing AI programs in multiple North Carolina cities is crucial for strengthening industry partnerships and creating pathways for students into the workforce.

e. Admission. List the following:

i. Admissions requirements for proposed programs (indicate minimum requirements and general requirements).
ii. Documents to be submitted for admission (listing)

Admission Requirements

Freshmen

- Minimum GPA: 2.5
- Admission is competitive for AI programs and, if admissible, freshmen must present a minimum SAT-Math score of 530 or ACT-Math subscore of 22.

Transfers

- Minimum GPA: 2.5
- Pre-Major/Prerequisite Courses: A grade of C or above is required in any previously attempted Computer Science course(s). Students must be able to transfer credits for the equivalent of College Algebra.
- Transferable Credit Hours: 24

Currently Enrolled Students

- Minimum GPA: 2.5
- Must have earned 12 or more hours at UNC Charlotte
- Must have earned a grade of C or higher in MATH 1241, or MATH 1120 (Note: Students coming in with MATH 1120 will still be required to take MATH 1241 for the Bachelor of Science program)
- Must have earned a grade of C or higher in ITSC 1212, or ITSC 1110, or DTSC 1302
- Participation in a Change of Major Workshop offered by the CCI Advising Center is required before becoming eligible to declare the AI major. Details are on the CCI Advising website.

f. Degree requirements. List the following:
i. Total hours required. State requirements for Major, Minor, General Education, etc.

The proposed BS in Artificial Intelligence will require students to complete general education requirements and complete 70 credit hours of study within the major. There will be no pre- requisites beyond those courses required for general education. The program will not seek specialized accreditation; accordingly, barriers to degree progression that might otherwise be associated with such programs will be avoided.
Proposed Curriculum:
General Education requirements (31-32 credit hours)
Major courses (70 credit hours, 6 of which meet Gen Ed Requirements)

- GenEd Math (Calculus I) - 3 cr
- Computing Core (including 3 cr of Discrete Math) - 22cr
- Math & Stats (including 3 cr that count towards GenEd) - 6 cr
- AI Required Courses - 15 cr
- AI Electives - 6 cr
- Non-CCI courses (minor, 2nd major, Honors program, free choice) - 15 cr
- Capstone - 3 cr

Free Electives (18-19 credit hours)
TOTAL DEGREE REQUIREMENTS: 120 credit hours

ii. Other requirements (e.g., residence, comprehensive exams, thesis, dissertation, clinical or field experience, "second major," etc.).

N/A

g. Enrollment. Estimate the total number of students that would be enrolled in the program during the first year of operation and in each delivery mode (campus, online, site, etc.)

	Campus	Online	Site	Full-Time	Part-Time
Year 1	55			53	2
Year 3	188			169	19
Year 5	400			360	40

h. For graduate programs only, please also answer the following:

Grades required	NA
Amount of transfer credit accepted	NA
Language and/or research requirements	NA
Any time limits for completion	NA

i. For all programs, provide a degree plan showing the sequence of courses to be taken each year. List courses by title and number and indicate those that are required. Include an explanation of numbering system. Indicate new courses proposed. A possible format is offered below as an example. If your institution uses a different format that provides the required information, it may be submitted instead.

Please see **Appendix D** for the complete plan of study.

III. Faculty

a. (For undergraduate and master's programs) List the names, ranks and home department of faculty members who will be directly involved in the proposed program. The official roster forms approved by your accreditor may be submitted. For master's programs, state or attach the criteria that faculty must meet in order to be eligible to teach graduate level courses at your institution.

See **Appendix G** for faculty list.

b. (For doctoral programs) List the names, ranks, and home department of each faculty member who will be directly involved in the proposed program. The official roster forms approved by your accreditor may be submitted. Provide complete information on each faculty member's education, teaching and research experience, research funding, publications, and experience directing student research including the number of theses and dissertations directed.

c. Estimate the need for new faculty for the proposed program over the first four years. If the teaching responsibilities for the proposed program will be absorbed in part or in whole by the present faculty, explain how this will be done without weakening existing programs, and how the current teaching responsibilities of those faculty will be covered.

We have projected the need for one new teaching faculty position at the inception of the program, with an additional teaching faculty member to be added each year until two are added in year five. The program will also receive support from existing faculty within the College of Computing and Informatics, which boasts a substantial team that has instructed many of the courses included in the proposed program. The introduction of new faculty members will ensure our capacity to deliver both current and newly proposed courses needed for this program. In addition, we anticipate that students enrolled in existing programs (such as the BS in Computer Science) will also be able to participate in the new BS in Artificial Intelligence courses, thereby enriching the educational experience for a broader range of students within the College.

d. Explain how the program will affect faculty activity, including course load, public service activity, and scholarly research.

The establishment of the new Bachelor of Science in Artificial Intelligence (AI) program will likely increase faculty activity across several areas. Course load will increase as the program grows, with additional courses and specialized content required to support the new curriculum. Over the past 5 years, the College of Computing and Informatics was able to hire 6 faculty members with the expertise in AI as part of the Engineering North Carolina Future investment. In the same period, overall enrollment in the College grew by more than 1,200 students too. To manage continuing increased demand and ensure the quality of instruction, we have requested new faculty lines, specifically teaching faculty, and TA support to match the growing teaching responsibilities.

Public service activity will see a shift, as faculty will be more engaged in community outreach and industry partnerships related to AI. Given AI's impact on multiple sectors such as healthcare, business, and cybersecurity, faculty members may collaborate with local organizations and businesses to offer expertise through consulting, training programs, and public talks. We have already established close collaborations in AI and Data Science research and internships / co-ops with Lowe's and Honeywell, and we believe other partnerships will follow. Additionally, faculty could play an active role in shaping AI-related policies within the university and fostering awareness within the broader community.

In terms of scholarly research, the program will significantly enhance opportunities for faculty. Many of our current faculty members are already engaged in AI research such as in **AI and mixed reality** in the Human Centered Computing (HCC) Lab and the Gaming and Mixed Reality Lab, **natural language processing, computer vision, and machine learning** in the CharMLab, and in the Center for Computational Intelligence to Predict Health & Environmental Risks (CIPHER); the new program will provide a pipeline of students eager to participate in research

projects. This collaboration between faculty and students will foster a dynamic research environment, leading to new projects, publications, and the possibility of interdisciplinary research with other institutions.

IV. Delivery Considerations. Provide assurances of the following (not to exceed 250 words per lettered item):

a. Access (online, site-based distance education, and off-campus programs). Students have access to academic support services comparable to services provided to on-campus students and appropriate to support the program, including admissions, financial aid, academic advising, delivery of course materials, and placement and counseling.

Since the majority of this program will be offered face-to-face on the main campus of UNC Charlotte, students will have access to resources that are traditionally made available to all undergraduate students. This support includes an academic advisor to assist with degree plan guidance; monitoring of academic standing; career planning; consultation on institutional policies, procedures, and requirements. Students will have regular access to faculty for face-to-face and/or virtual office hours and may access additional campus resources (e.g., Disability Services, Multicultural Academic Services, Financial Aid, Library, Career Center, the University Center for Academic Excellence, and Writing Resources Center) as needed. These resources offer a broad range of services that include, but are not limited to: Disability Services ensures access to academic programs and campus facilities by providing verification of medical documentation, academic accommodations, counseling, testing, note-taking, and scholarships. University Center for Academic Excellence offers activities such as tutoring, supplemental instruction, academic success workshops, peer mentoring, academic success seminars, a learning lab, and individual consultations, all to support the effort to retain undergraduate students. Writing Resources
Center offers one-to-one writing instruction in writing across the disciplines from first-year to graduate, presentations, and workshops. Consultations, on-line services, and a library of writing-related instructional material are also available.

b. Curriculum delivery (online and site-based distance education only). The distance education technology to be used is appropriate to the nature and objectives of the program. The content, methods and technology for each online course provide for adequate interaction between instructor and students and among students. What is the impact of online delivery on student access to the program, and what strategies are in place to support students who have internet limitations?

N/A- this is an on-campus program

c. Faculty development (online and site-based distance education only). Faculty engaged in program delivery receive training appropriate to the distance education technologies and techniques used.

N/A- this is an on-campus program

d. Security (online and site-based distance education only). The institution authenticates and verifies the identity of students and their work to assure academic honesty/integrity. The institution assures the security of personal/private information of students enrolled in online courses.

N/A- this is an on-campus program

V. Library

a. Provide a statement as to the adequacy of present library holdings for the proposed program to support the instructional and research needs of this program (this should be developed in consultation with the University Librarian).

Current library holdings are adequate to support student research for this program. Students have access to relevant databases, including *ACM Digital Library, IEEEXplore, ScienceDirect, Web of Science, Computer and Information Systems Abstracts, Synthesis Digital Library of Engineering and Computer Science,* and many others. The library owns hundreds of thousands of e-books from Springer, Wiley, Elsevier, Cambridge, and other publishers, mostly STEM subject matter, in addition to a growing print collection.

The library has current online subscriptions to thousands of journal titles in this area.

b. If applicable, state how the library will be improved to meet new program requirements for the next four years. The explanation should discuss the need for books, periodicals, reference material, primary source material, etc. What additional library support must be added to areas supporting the proposed program?

The library offers responsive support to the research needs of the department. Faculty and graduate student researchers can contact the science librarian directly for one-time purchase materials that are needed, usually book titles or data sets. For ongoing subscriptions needed, the librarian will work with faculty in the department to prioritize and make requests of the library and university to support new research materials needed to propel the work forward.

c. Discuss the use of other institutional libraries (outside of your institution) in delivery of the program.

The library has a highly-rated Interlibrary Loan (ILL) Department. Faculty, students, and staff can make requests through an easy-to-use web interface, with the capability of auto-filling from any of our databases. Book chapters, conference proceedings, and journal articles are scanned and delivered electronically from other institutions as PDF files within 24-48 hours. Print books are mailed and delivered within 5 business days. Any materials that the library is unable to borrow from other libraries or requested multiple times will be purchased, if available for sale. We, along with other universities in the state are also a site for NC LIVE, a statewide electronic resources consortium that makes digital resources accessible to North Carolina residents.

d. For doctoral programs, provide a systematic needs assessment of the current holdings to meet the needs of the program.

N/A

VI. Facilities and Equipment

a. Describe the effect of this new program on existing facilities and indicate whether they will be adequate, in year one, five, and ten of the program's operation.

Facilities are currently available for the AI program staff on the campus of UNC Charlotte in the Woodward building, Bioinformatics building, and will be available in the Burson building after the already-proposed, approved, and planned renovations/expansion. The Burson expansion will include staff offices for advising and program management in addition to numerous new faculty offices. All faculty have private offices, conference rooms, and workspaces through the College of Computing and Informatics. Depending on growth, additional faculty offices may be required.

i. Will any new square footage be required at any point in the first ten years of the program's operation? If so, please provide an overview of requirements, timeline, projected costs, and projected funding sources.

Space for new faculty and research labs are being accounted for in a current renovation and expansion of Burson Hall on UNC Charlotte campus and part of our expansion of the interdisciplinary collaboration between the School of Data Science, the College of Engineering, and the College of Computing and Informatics. This expansion has two foci: enhancing undergraduate student success by collocating faculty and staff with freshmen and sophomores. The other focus is the expansion of interdisciplinary research. The renovated building will add 10,800 net square feet of space with an additional 30,000 square feet of shell built for future expansion. The funding has already been allocated to UNC Charlotte for the Burson expansion through the North Carolina State Budgeting process. Tentative completion is expected in 2027, which aligns with the timeline of growth for the proposed program.

Renovations are also planned for additional space in the Bioinformatics building to support CCI faculty and graduate students. This increased presence of CCI faculty and students in the Bioinformatics building will free up space in Woodward, providing additional capacity to support the AI program.

ii. Will any existing square footage require repair, renovation, or retrofit? If so, please provide an overview of requirements, timeline, projected costs, and projected funding sources.

Funding for the Burson refurbishment has already been allocated through the State budget with refurbishment timing expected to be aligned with the expansion. Bioinformatics renovations have been completed in 2022.

Depending on growth, further renovations may be warranted in year 4 to accommodate increased TA offices or to reconfigure current office floor plans for better space utilization.

b. Describe the effect of this new program on existing technology, information technology, and services and indicate whether they will be adequate, in year one, five, and ten of the program's operation.

Program faculty are closely affiliated with CCI-supported labs, equipment, and technology, all of which will play a crucial role in advancing the development of the AI programs. We anticipate that the expansion of AI research, fueled by the growth of our AI programs, will be further supported by grants, enabling the acquisition of

additional state-of-the-art technology.

High Performance Computing:

UNC Charlotte and the High Performance Computer Science (HPCS) Lab have a wide arrangement of cutting-edge high-performance computing equipment for students to leverage in their research. University Research Computing provides access to the Orion Cluster, an advanced computing cluster containing NVIDIA Ampere GPUs and a variety of other resources. Additionally, the HPCS lab has brand new Hopper GPUs and two Grace-Hopper systems from NVIDIA.

Graphical Processing Units:

CCI is equipped with advanced computing resources, including powerful Graphics Processing Units (GPUs), which are essential for handling the intensive computational demands of AI education, research and applications. These GPUs enable us to efficiently process large datasets, train complex machine learning models, and support the cutting-edge technologies that will be central to the new AI program.

Servers:

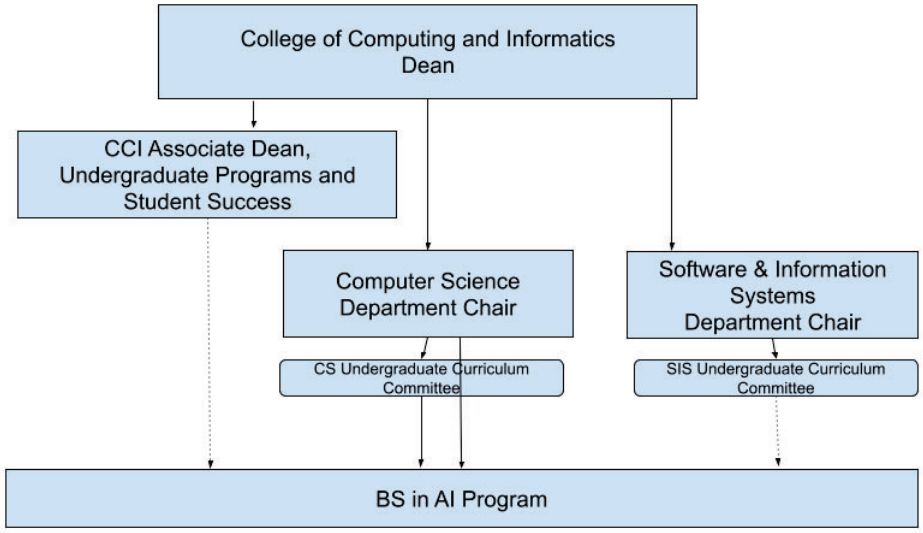
CCI, through UNC Charlotte's OneIT Office manages a robust infrastructure with over 20 servers and continuously assesses the evolving needs of our students, researchers and academic programs. Additional resources may be required to support growth and innovation.

VII. Administration

a. Describe how the proposed program will be administered, giving the responsibilities of each department, division, school, or college. Explain any inter-departmental or inter-unit administrative plans. Include an organizational chart showing the "location" of the proposed new program.

The BS in AI will be housed within the Computer Science Department under the College of Computing and Informatics (CCI) at UNC Charlotte. Faculty from Computer Science and Software and Information Systems Departments—both within CCI—will contribute to course instruction. These departments already collaborate effectively through the existing joint BS and BA in Computer Science programs.

While course topics may cross departments, the program will be administered by the Computer Science Department, overseeing curriculum, faculty assignments, and student support, while the College will provide overall strategic direction and resource allocation. An organizational chart will illustrate the program's placement within CCI.



b. For joint programs only, include documentation that, at minimum, the fundamental elements of the following institutional processes have been agreed to by the partners:
   i. Admission process
   ii. Registration and enrollment process for students
   iii. Committee process for graduate students
   iv. Plan for charging and distributing tuition and fees
   v. Management of transcripts and permanent records
   vi. Participation in graduation
   vii. Design of diploma

N/A

VIII. Additional Program Support

a. Will additional administrative staff, new master's program graduate student assistantships, etc. be required that were not previously identified in the Request for Preliminary Authorization? If so, please describe each item, state the estimated new dollars required at steady state after four years, and state the source of the new funding and resources required.

N/A

IX. Accreditation and Licensure

a. Where appropriate, describe how all licensure or professional accreditation standards will be met, including required practica, internships, and supervised clinical experiences.

   N/A – This program does not lead to licensure and will not be accredited by any professional organization beyond our institutional accreditation.

b. Indicate the names of all accrediting agencies normally concerned with programs similar to the one proposed. Describe plans to request professional accreditation.

N/A

c. If the new degree program meets your accreditor's definition for a substantive change, what campus actions need to be completed by what date in order to ensure that the substantive change is reported to your accreditor on time?

N/A

d. If recipients of the proposed degree will require licensure to practice, explain how program curricula and title are aligned with requirements to "sit" for the licensure exam. List what state(s) the institution has determined the program meets professional licensure requirements for and how that information will be communicated to students and prospective students.

N/A

X. Evaluation Plans

a. What student learning outcomes will be met by the proposed program and how will student proficiency be measured? These items may be updated as necessary to meet student and program needs.

Graduates of the BS in AI at UNC Charlotte will meet the following student learning outcomes:

Program Student Learning Outcomes
BSAI1: Graduates will be able to communicate technical material effectively to both technical and non-technical audiences.
BSAI2: Graduates will be able to evaluate the ethical implications of applied AI.
BSAI3: Upon completing the computing core, students will master the core concepts of computer science, with emphasis on demonstrations of programming and use of data structures.
BSAI4: Graduates will be able to explain and evaluate how databases support AI-driven applications.
BSAI5: Graduates will be able to develop and apply machine learning models, extract meaning, automate analysis and decision-making.

Appendix E describes how student proficiency will be measured, including:

i. Curriculum Map with essential skills and knowledge marked as introduced, practiced, and assessed across the program's courses.
ii. Rubrics to evaluate the programmatic student learning outcomes.

b. The plan and schedule to evaluate the proposed new degree program prior to the completion of its fourth year of operation (to include types of measurement, frequency, and scope of program review).

Evaluation	**2026-2027** (1st yr)	**2027-2028**	**2028-2029**	**2029-2030**	**5-7 yrs** post-establishment
Program Evaluation					
Annual Overview	X	X	X	X	
Program Review					X
SLO Assessment					
BSAI1 (Communication)	Data Collection (partial)	Study Results	Improvement & Data Collection (partial)	Data Collection (full)	
BSAI2 (Ethics)		Data Collection	Data Collection	Study Results	
BSAI3 (CS Core)		Data Collection	Study Results	Improvement & Data Collection	
BSAI4 (Databases)				Data Collection	
BSAI5 (Machine Learning)				Data Collection	

Program Evaluations

a. Annual Overview. CCI examines academic programs every spring. In this meeting program directors, department chairs, assessment directors, associate deans, and the dean (when available) gather to discuss the following:
   i. Review of previous years goals.
      1. Review Key Performance Indicators (KPIs) indicating successes and struggles
      2. Written narrative of actions taken to support goals
   ii. Next year's goals
      1. Renew previous goals or change goals
      2. Establish new or reconfirm continued KPIs
b. Program Review. UNC System Policy 400.1, Policy on Academic Program Planning requires that all academic degree programs be reviewed at least once every seven years at the campus level starting from

the date of the preceding review for existing programs or from the date of the implementation for new programs. CCI follows the requirements of the NC System and the procedures set forth by the university. The goal of this in-depth program review is to:

i. recognize strengths and achievements;
ii. identify areas in need of attention; and
iii. promote goal setting and planning.

Student Learning Outcome (SLO) Assessments

The BS in Artificial Intelligence will run on a multi year improvement plan and SLO cycle of collection, study, and improvement.

a. Data Collection. This is a period of data collection. Once the program is established, a collection period will typically follow an improvement year. This gives us an opportunity to see evidence of improvement. As we establish this new program, our first instances of data collection will include the introduction of SLOs and corresponding rubrics. Assessment data will be collected and reported on.
b. Study Results. Data collection is halted to reexamine the Student Learning Outcome, the assessment process, or educational experience. When available, two years worth of data will be analyzed and an improvement plan developed and implemented for the following year. In lieu of data collection, in-depth assessment meetings will take place and changes will be documented and approved by program leadership.
c. Improvement. Results of the study year are implemented–new assignments, new assessments, new processes, are rolled out. Bugs should be addressed this year so that the next year, the collection year, is an uninterrupted quiet collection year. Assessment data will be collected and reported on.

XI. Supporting Fields

a. Discuss the number and quality of lower-level and cognate programs in operation at the institution for supporting the proposed degree program.

The College of Computing and Informatics (CCI) supports first- and second-year computer science students through the already established Integrated Critical Core (ICC), ensuring a strong foundation for all students, regardless of prior computing experience. The BS in AI will leverage existing ICC courses, including ITSC 1212, ITSC 1213, ITSC 2214, and ITSC 2175, which are also part of the BS in Computer Science (CS) curriculum.

Additionally, the BS in CS offers a concentration in AI, Robotics, & Gaming (AIRG), which shares significant coursework with the proposed AI program. Depending on elective choices, a BS in AI student could share between 80% – 92% of their coursework with a BS in CS (AIRG) student, demonstrating strong academic alignment and resource efficiency. See **Appendix F** for curriculum crosswalk.

b. Are other subject-matter fields at the proposing institution necessary or valuable in support of the proposed program? Is there needed improvement or expansion of these fields? To what extent will such improvement or expansion be necessary for the proposed program?

The Mathematics Department plays a vital role in supporting the proposed BS in AI program. In collaboration with the College of Computing and Informatics (CCI), the department has developed a new "Math for CS" course teaching concepts of linear algebra and statistics necessary for both Computer Science and Artificial Intelligence majors. This course is currently in the approval process and will be integrated into both curricula, strengthening the mathematical foundation necessary for AI coursework. No additional expansion is required at this time, as

existing resources and faculty expertise are sufficient to support the program.

XII. Costs, Funding, and Budget

Adding a new degree program will cost the institution some amount of money and will potentially generate new revenues. Calculating the costs and identifying the funding sources associated with implementation of a new program requires several institutional offices (e.g., academic affairs, finance, institutional research, enrollment management) to collaborate to present an accurate estimate.

a. Complete and attach the *UNC System Academic Program Planning Financial Worksheet* showing all costs required and revenues generated for each of the first five years of the program. Provide a budget narrative for each year addressing the following:

   i. UNC Academic Program Costs

   Faculty costs include all faculty assigned to the proposed program, including faculty serving as program directors, coordinators, department chairs, etc., funded in the 101 instructional budget code. If an existing faculty member is reassigned to the program, the salary is reflected as a reallocated cost. New faculty salaries need to be competitive for the discipline, and figures should include all applicable fringe (e.g., retirement, medical). If the proposed program will hire new faculty, it is a new cost.

   Graduate Assistant costs are identified either as new or reallocated, as appropriate, and should include all stipends, tuition remission, and benefits, as applicable.

   EHRA Non-Faculty positions include non-instructional academic support costs directly associated with running the program, including amounts associated with the Dean's office, research support, etc. This should include salaries and all applicable fringe.

   SHRA Non-Faculty positions include all positions specific costs associated with the new program. This includes the additional staff needed to organize applications, prepare for the proposed program, and for general administration of the proposed program. New staff or purchases of new equipment should be adequate to support the stated goals and enrollments for the proposed program. Other program costs identified in the proposal should be realistic.

The proposed BS in Artificial Intelligence program curriculum takes advantage of existing computer science courses and labs that are already offered as a part of our BS in Computer Science and B.A. in Computer Science. Twenty percent of the curriculum, 9 courses, will be developed as new and distinct from the BS in Computer Science with a concentration in Artificial Intelligence, Robotics, and Gaming. There is no new general education course required for the proposed curriculum. As a result, new faculty lines are requested primarily for new course development and increased student enrollment, but no new lab equipment, or new facilities are requested for the initial program offering.

The forecasted enrollment growth and the 9 new courses will increase faculty teaching load. To efficiently handle the increased load, 6 new teaching faculty positions are requested by the end of Year 5. Expected enrollment will necessitate 1 new teaching faculty each year until year 5, when 2 new faculty are requested. We assume that new students will take, on the average, 9 credit hours in the College of Computing each semester, either in newly developed AI courses or in existing Computer Science courses that are part of the BS AI curriculum. This is a realistic assumption, given program requirements. With a class size of up to 75, and the projected student growth

shown in the table below, 6 new sections will be needed in Year 1. This is the typical workload of a teaching faculty member. To further support instruction, we are requesting resources for Teaching Assistants (TAs). We assume a student-to-TA ratio of 40:1, with approximately 60% of TAs being undergraduate students and 40% being MS students. For Year 1 this implies the request for 6 undergraduate and 3 MS TAs. Additionally, PhD TAs would serve as "Lead TAs", i.e., lab coordinators and instructors for introductory courses that have a lab component. These assumptions lead to the request for 6 new teaching faculty members, 60 new TAs (36 UG plus 24 MS) and 4 PhD TAs by Year 5, given the expected enrollment growth.

	Year 1	Year 2	Year 3	Year 4	Year 5
Student Enrollment	55	122	188	294	400
Teaching Faculty	1	2	3	4	6
UG TAs	6	12	18	27	36
MS TAs	3	7	11	18	24
PhD TAs	1	2	3	3	4

In addition to faculty and TAs, the program will require one dedicated Student Advisor and ½ FTE Student Services Specialist. Program administration will require a ½ FTE month stipend for the Program Director. There are, in addition, expenses for faculty members teaching General Education courses outside of the College of Computing and Informatics. Minor expenses related to supplies, materials, and student scholarships are included. Lastly, an overhead of 50% is budgeted to pay for Library services, Office of Assessment and Accreditation, Human Resources, Information Technology, utilities, facilities upkeep, classroom renovations, etc., all of which is detailed in the attached Academic Program Planning Financial Worksheet, Appendix A.

In summary, the total estimated new costs of the program are approximately $7.9M over the initial five years, as detailed in the attached Academic Program Planning Financial Worksheet, Appendix A.

ii. UNC Academic Program Revenues

Funding sources may include enrollment growth formula funding, other state appropriation, regular tuition, tuition differential, general fees, special fees, reallocation of existing resources, federal funding, and other funding (such as awarded grants or gifts). The total projected revenue from the above categories should allow the proposed program to become self-sufficient within five years.

When estimating funding for new programs, institutions should take into account that students switching programs do not generate additional enrollment growth formula funds. For example, if a program projects enrollment of 20 students, by 12 of them switched into the program from an existing program at the institution, then only 8 of the students would generate additional formula funding.

Reallocation of Existing Resources includes the salary of faculty reassigned who may be

partially or wholly reallocated to the new program. Explain how the current teaching obligations of those faculty are reallocated and include any faculty replacement costs as program costs in the budget. If substantial funds are reallocated, explain how existing undergraduate and graduate programs will be affected.

Federal Funding (In-hand only) refers to federal monies from grants or other sources currently in hand. Do not include federal funding sought but not secured. If anticipated federal funding is obtained, at that time it can be substituted for funds designated in other funding categories. Make note within the text of the proposal of any anticipated federal funding. Provide evidence of sustainability after federal funds have been exhausted.

Our analysis predicts a total enrollment of 400 students by Year 5, with an estimated 50 major-change students from existing programs. The 50 major change students may come from many existing majors, and that may result in slight change in credit hours in their original majors. Nevertheless, given the overall enrollment growth at UNC Charlotte, such a reduction in credit hours is unlikely. Using current rates, the total revenue from tuition and fees over five years is computed as $12.1M, as detailed in the attached Academic Program Planning Financial Worksheet, Appendix A. As the program grows, major fees will be used to support teaching, student services, and recruiting and outreach efforts. The tuition and appropriation revenues are determined at an institutional level. The numbers reflected may or may not reflect an actual change in the university budget.

b. Based on the institutions' estimate of available existing resources or expected non-state financial resources that will support the proposed program (e.g., federal support, private sources, tuition revenue, etc.), please describe the following:

i. How does the institution budget and allocate enrollment growth revenues? Is this program expected to generate new enrollment growth for the institution? If so, how will funds be allocated to the proposed program or be used to further other institutional priorities?

The proposed program is expected to generate new enrollment growth for UNC Charlotte. Increases in enrollment as well as Student Credit Hours (SCH) are reviewed by the Dean's office and examined within the context of the UNC System Office funding formula and University priorities when determining allocation of enrollment growth funds and general tuition and fees. Funds received at the department level will be used to support teaching, student services, and recruiting and outreach in proportion to the enrollment growth.

ii. Will the institution seek other additional state appropriations (both one-time and recurring) to implement and sustain the proposed program? If so, please elaborate.

No.

iii. Will the institution require differential tuition supplements or program-specific fees? If so, please elaborate.
   1. State the amount of tuition differential or program-specific fees that will be requested.
   2. Describe specifically how the campus will spend the revenues generated.
   3. Describe the anticipated impact of the tuition differential or program-specific fee are expected to impact student access.

The major fee currently in place in the College of Computing and Informatics is $225 per year[9]. We will request an equivalent fee for this new program. We will invest this generated revenue to support student success initiatives.

c. Provide a description of how the program can be implemented and sustained If enrollment increase funding, differential tuition, or other state appropriations noted in the budget templates are not forthcoming.

This program is not dependent on differential tuition or special state appropriations. Program expansion would be slowed in the absence of enrollment growth funding to fully support the anticipated demand.

XIII. Additional Information. Include any additional information deemed pertinent to the review of this new degree program proposal.

XIV. Attachments. Attach *the UNC System Academic Program Planning Worksheet* as the first attachment following this document, the final approved Request for Preliminary Authorization as the second attachment, followed by any other relevant documents.

Appendix A: UNC System Academic Program Planning Financial Worksheet
Appendix B: Request for Preliminary Authorization
Appendix C: UNC Charlotte's existing AI-related programs and courses
Appendix D: Plan of Study BS in AI
Appendix E: BS-in-AI Student Learning Outcomes Assessment Plan
Appendix F: BS in AI Curriculum Crosswalk
Appendix G: Faculty List BS in AI

[9] https://ninercentral.charlotte.edu/wp-content/uploads/sites/803/2023/09/Undergraduate_MainCampus_2324.pdf

XV. Signatures. This proposal to establish a new program has been reviewed and approved by the appropriate campus committees and authorities and has my support.

Position Title	Signature	Date
Chancellor	DocuSigned by: Sharon Gaber 2FF1496738C7414...	03/26/2025 | 6:03 PM EDT
Provost	DocuSigned by: Jennifer Troyer CB79653C3A82433...	03/26/2025 | 2:05 PM EDT
Chief Financial Officer	DocuSigned by: Richard Amon 03B88EFF44BD4C5...	03/26/2025 | 4:17 PM EDT

(Only complete below for partner institution if this is a joint degree program proposal)

Position Title	Signature	Date
Chancellor		
Provost		
Chief Financial Officer		

	Current Program Sources (if applicable)	Rate	Year 0 (Start Up)	1st Year	2nd year	3rd Year	4th Year	5th Year	TOTALS
1	General Fund Appropriation								$ -
2	NC Promise Appropriation								$ -
3	*Resident Enrollment (FTE)*			25	50	50	50	25	
4	Regular Resident Tuition (Annual Rate)	$ 3,812	$ -	$ 95,300	$ 190,600	$ 190,600	$ 190,600	$ 95,300	$ 762,400
5	*Nonresident Enrollment (FTE)*			2	4	4	4	2	
6	Regular Nonresident Tuition (Annual Rate)	$ 19,065	$ -	$ 38,130	$ 76,260	$ 76,260	$ 76,260	$ 38,130	$ 305,040
7	Tuition Differential (Annual Rate)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
8	Special Fees	$ 3,427	$ -	$ 92,529	$ 185,058	$ 185,058	$ 185,058	$ 92,529	$ 740,232
9	External Funding (In-Hand Only)								$ -
10	Other Funding (Identify)								$ -
11	**Total Current Sources**		$ -	$ 225,959	$ 451,918	$ 451,918	$ 451,918	$ 225,959	$ 1,807,672
	Proposed New Program Sources								
12	*Incremental Resident SCH*			600	1,512	2,976	5,280	8,232	
13	Enrollment Funding Appropriation (CIP 11.0102)	$ 386	$ -	$ -	$ 115,800	$ 407,616	$ 866,184	$ 1,593,408	$ 2,983,008
14	*Resident Enrollment (FTE)*			25	63	124	220	343	
15	Regular Resident Tuition (Annual Rate)	$ 3,812	$ -	$ 95,300	$ 240,156	$ 472,688	$ 838,640	$ 1,307,516	$ 2,954,300
16	NC Promise Appropriation (Resident)		$ -	$ -	$ -	$ -	$ -	$ -	$ -
17	*Nonresident Enrollment (FTE)*			3	5	10	20	30	
18	Regular Nonresident Tuition (Annual Rate)	$ 19,065	$ -	$ 57,195	$ 95,325	$ 190,650	$ 381,300	$ 571,950	$ 1,296,420
19	NC Promise Appropriation (Nonresident)		$ -	$ -	$ -	$ -	$ -	$ -	$ -
20	Tuition Differential (Annual Rate)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
21	Special Fees	$ 3,427	$ -	$ 95,956	$ 233,036	$ 459,218	$ 822,480	$ 1,278,271	$ 2,888,961
22	External Funding (In-Hand Only)								
23	Other Funding (Identify)- major fees	225		6,300	15,300	30,150	54,000	83,925	$ 189,675
24	**Total New Sources**		$ -	$ 254,751	$ 699,617	$ 1,560,322	$ 2,962,604	$ 4,835,070	$ 10,312,364
25	**Total Proposed Program Sources**		$ -	$ 480,710	$ 1,151,535	$ 2,012,240	$ 3,414,522	$ 5,061,029	$ 12,120,036

Comments

Check	55	122	188	294	400
Goal	55	122	188	294	400

Chief Financial Officer

Name Richard Amon

Date 03/26/2025 | 4:17 PM EDT

Signature

X DocuSigned by: Richard Amon 03B88EFF44BD4C5...

		Year 0 (Start Up)	1st Year	2nd year	3rd Year	4th Year	5th Year	TOTALS
	Current Program Uses (if applicable)							
1	Tenure/Tenure-Track Faculty							$ -
2	Non Tenure-Track Faculty							$ -
3	Graduate Student Support							$ -
4	Non-Faculty Positions							$ -
5	Student Support (Scholarships)							$ -
6	Libraries							$ -
7	Supplies and Materials		10,000					$ 10,000
8	Travel, Communications, and Fixed Charges							$ -
9	Equipment and Technology							$ -
10	Facility Repair and Renovation							$ -
11	Other (Identify)							$ -
12	**Total Current Uses**	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ 10,000
	Proposed New Program Uses							
13	Tenure/Tenure-Track Faculty	-						$ -
14	Non Tenure-Track Faculty	-	129,705	259,410	389,115	518,820	778,230	$ 2,075,280
15	Graduate Student Support	-	79,245	170,490	261,735	345,735	460,980	$ 1,318,185
16	Non-Faculty Positions	-	114,764	114,764	114,764	114,764	114,764	$ 573,820
17	Student Support (Scholarships)	-	50,000	50,000	50,000	50,000	50,000	$ 250,000
18	Libraries	-						$ -
19	Supplies and Materials	-	5,000	5,000	5,000	5,000	5,000	$ 25,000
20	Travel, Communications, and Fixed Charges	-						$ -
21	Equipment and Technology	-	10,000	10,000	10,000	10,000	10,000	$ 50,000
22	Facility Repair and Renovation	-						$ -
23	Facility New Construction or Expansion	-						$ -
24	Other (Identify)	-	64,822	122,422	180,022	266,422	352,822	$ 986,511
25	**Total New Uses**	$ -	$ 453,536	$ 732,086	$ 1,010,636	$ 1,310,741	$ 1,771,796	$ 5,278,796
	Overhead (HR, startup, IT, utilities, classroom renov/tech, etc)		$ 226,768	$ 366,043	$ 505,318	$ 655,371	$ 885,898	$ 2,639,398
26	**Total Proposed Program Uses**	$ -	$ 690,304	$ 1,098,129	$ 1,515,954	$ 1,966,112	$ 2,657,694	$ 7,928,194

Comments

Chief Financial Officer

Name Richard Amon

Date 03/26/2025 | 4:17 PM EDT

Signature X DocuSigned by: Richard Amon 03B88EFF44BD4C5...

New Academic Degree Program Request for Preliminary Authorization

Institution University of North Carolina at Charlotte

Degree Program Title (e.g., M.A. in Biology) B.S. in Artificial Intelligence

Reviewed and Approved By (Provide Name and title only. No signature required in this section.)

Review	Name	Title
Chief Financial Officer	Richard Amon	Vice Chancellor for Business Affairs
Faculty Senate Chair (Or appropriate faculty body)	Xiaoxia Newton	Faculty Council President
Graduate Council (If applicable)	NA	
Graduate/Undergraduate Dean (If applicable)	NA	
Academic College/School Dean	Bojan Cukic	Dean, College of Computing and Informatics
Department Head/Chair	Min Shin	Chair, Department of Computer Science
Program Director/Coordinator	Harini Ramaprasad	CCI Associate Dean, Undergraduate Programs and Student Success

New Academic Proposal Process

New academic programs are initiated and developed by faculty members. The Request for Preliminary Authorization must be reviewed and approved by the appropriate individuals listed above before submission to the UNC System Office for review.

Please provide a succinct, yet thorough response to each section. Obtain signatures from the Chancellor and Provost and submit the proposal via the PREP system to the UNC System Vice President for Academic Programs, Faculty, and Research, for review and approval by the UNC System Office. If the Request for Preliminary Authorization is approved, the institution may begin work on the formal Request to Establish a New Academic Degree Program.

NOTE: If an institution is requesting preliminary authorization for a degree program at a higher level than their current Carnegie Classification (e.g., a Master's institution proposing a doctoral degree), then a request

for a mission review must first be submitted to the UNC Board of Governors Committee on Educational Planning, Programs, and Policies, through the Senior Vice President for Academic Affairs. If approved by the Board, then the institution may proceed with the Request for Preliminary Authorization.

UNC Institution Name	University of North Carolina at Charlotte
Institutional Accreditor (e.g., SACSCOC)	SACSCOC
Joint Degree Program (Yes or No)? If so, list partner institution.	No
Degree Program Title (e.g., M.A. in Biology)	B. S. in Artificial Intelligence
CIP Code and CIP Title (May be found at National Center for Education Statistics)	11.0102 Artificial Intelligence
Require UNC Teacher Licensure Specialty Area Code (Yes or No). If yes, list suggested UNC Specialty Area Code(s).	No
Proposed Delivery Mode (campus, online, or site-based distance education). Add maximum % online, if applicable.	Campus
Will this program be offered by an outside provider such as an Online Program Manager (OPM) or Project Kitty Hawk (PKH)? If yes, list the provider.	No
Proposed Term to Enroll First Students (e.g., Fall 2023)	Fall 2026

I. Accreditor Liaison Statement: *(Provide a brief statement from the university accreditor liaison regarding whether the new program is or is not a substantive change.)*

This new program is not substantive and does not require SACSCOC notification or approval.

II. Program Summary: (*Briefly describe the proposed program and summarize the overall rationale.*) Maximum of 1,000 words.

Include the following in your narrative:

a. How this program supports specific university and UNC System missions.
b. Collaborative opportunities with other UNC institutions as appropriate.
c. Ways in which the proposed program is distinct from others already offered in the UNC System. Information on other programs may be found on the UNC System website, and all similar

programs should be listed here (use the 4-digit CIP as a guide).

d. How does the program align with the UNC System and institutional strategic plan?

Supporting the Missions of UNC Charlotte and the UNC System

Establishing a Bachelor of Science (BS) in Artificial Intelligence (AI) at UNC Charlotte aligns with its mission as a leading urban research institution with substantial local-to-global impact. Through accessible and affordable education, this program will prepare students to address real-world challenges with cutting-edge AI expertise.

The program supports the mission of the UNC System, emphasizing education, research, and public service for North Carolinians. Labor market projections indicate a significant rise in AI-related jobs across North Carolina (NC), particularly in healthcare, finance, cybersecurity, and transportation.

According to EAB, strong employer demand suggests ample opportunities for AI graduates in statewide and regional labor markets. Between February 2024 and January 2025, EAB identified **6,508 statewide AI-related job postings and 28,224 regional ones**, highlighting a robust workforce demand.[1]

By offering this program, UNC Charlotte will strengthen NC's workforce development. The university is already a leader in AI research, with advancements in mixed reality, natural language processing, computer vision, and machine learning through the Human Centered Computing (HCC) Lab, the Gaming and Mixed Reality Lab, the CharMLab, and the Center for Computational Intelligence to Predict Health & Environmental Risks (CIPHER). With faculty from the College of Computing and Informatics (CCI) at the forefront of AI innovation, the program is guided by leading scholars and practitioners in the field.

Collaboration with Other NC Institutions

The program will foster collaboration with other UNC institutions, promoting best practices, interdisciplinary research and shared resources in AI innovation. UNC Charlotte's CCI Dean consulted Dr. Kaushik Roy, Department Chair of Computer Science at NC A&T University regarding their experience developing an undergraduate AI program. Approved by the UNC System Board of Governors in 2024, NC A&T's BS in AI was set for a Fall 2025 launch but the timeline shifted and may now align with UNC Charlotte's planned launch in Fall 2026. While other universities offer AI concentrations within computer science degrees, these will be the only stand-alone AI bachelor's programs in the state.

Distinction from Existing Programs in the UNC System

Currently, NC A&T is the only UNC System institution planning to offer an undergraduate degree in AI[2], projected for Fall 2026. Their program will offer two tracks: AI Computing and Engineering Track (AICE) in the College of Engineering (Computer Science), and Applied AI Track in the College of Science and Technology

[1] EAB. (2025, February). Market pulsecheck for a bachelor's-level artificial intelligence program. See Appendix B for the full study.

[2] North Carolina Agricultural and Technical State University. (2024, November). *Artificial Intelligence research to drive economic development.* Retrieved from https://www.ncat.edu/news/2024/11/artificial-intelligence.php

(Computer Systems Technology). UNC Charlotte's BS AI proposal aligns with NC A&T's AICE Track, both built around a computer science curriculum, with introductory AI courses. UNC Charlotte's distinguishing features include a freshman AI Literacy course, emphasis on cloud-first development, and six clusters of senior-level electives, elevating student preparation for AI careers beyond what a concentration in another computing major could achieve.

UNC Charlotte, home to NC's largest computing program and its only Graduate Certificate in Applied AI, is uniquely positioned to offer a distinct AI degree. With established CCI programs in computer science, data science, and sports analytics - fields rapidly evolving with AI - UNC Charlotte can deliver a program focused on applied learning, real-world problem-solving, cross-disciplinary collaboration, and hands-on experiences.

Both UNC Charlotte and NC A&T can contribute to AI education and workforce development in NC, each with unique strengths. UNC Charlotte's location in one of NC's largest cities, R1 status, and ties with companies like Bank of America, Ally, Duke Energy, Lowe's, can facilitate program growth.

UNC Charlotte also offers many graduate opportunities, including MS degrees in Computer Science, IT, Cybersecurity, Data Science and Business Analytics, and a proposed MS in AI, providing students - including NC A&T BS in AI graduates, pathways to further education and advanced skills development.

Distinction from Existing Programs Across the Nation

According to iPeds Data Center (DOE)[3], less than 20 universities awarded an AI-specific undergraduate degree (CIP code 11.0102) in 2023, highlighting strong market need, given the expected rapid growth for AI-related jobs. Compared to other current BS in AI programs, UNC Charlotte offers affordable tuition for NC residents and a wide selection of courses from a variety of cutting-edge AI course clusters, including, machine learning, robotics & decision-making, human-AI interactions, AI system design, and AI security. Backed by one of the nation's largest computing colleges, the program benefits from extensive experience in educating large student cohorts, as demonstrated by over 3,000 undergraduate CCI degrees awarded since Fall 2019.

Alignment with the UNC System's and UNC Charlotte's Strategic Plans

UNC System Strategic Plan Alignment

- **Student Success:** By integrating real-world case studies, professionalism, and AI ethics into a curriculum grounded in theoretical and analytical skills, the program will equip students with competitive skills and job-ready expertise.
- **Affordability and Efficiency:** UNC Charlotte's commitment to affordability will extend to this program, ensuring cost-effectiveness while maintaining high-quality instruction.
- **Economic Impact and Community Engagement:** The AI field is projected to drive job creation and economic growth. EAB reports a 0.45% average monthly increase in regional demand for bachelor's-level AI professionals over the past 36 months, while overall bachelor's-level demand declined an

[3] IPEDS Data, https://nces.ed.gov/ipeds/use-the-data, Filter includes: US, Title IV, degree-granting institutions, CIP code 11.0102, year: 2023.

average monthly 0.80%.[4] This program will help meet workforce needs, strengthening the local and state economy.

UNC Charlotte Strategic Plan Alignment

- **Transform Students' Lives Through Educational Opportunity and Excellence:** This program will equip students with cutting-edge AI knowledge through career-ready case studies and practice with industry-used tools, preparing them for leadership roles in emerging industries.
- **Power the Future Through Inquiry, Research, and Creative Discovery:** While primarily industry-focused, the program will have undergraduate research and thesis options, enabling faculty and students to engage in pioneering discoveries that advance AI applications in areas such as AI and mixed reality, natural language processing, computer vision, cybersecurity, and computer intelligence for predictive health and environmental risk analysis.
- **Drive Progress for North Carolina and Beyond:** Aligned with the NC System's Economic Impact and Community Engagement goals, UNC Charlotte's AI program will support statewide progress. EAB projects above-average employment growth in the top five occupations seeking bachelor's-level AI professionals between 2025 and 2035.[5]

III. Student Demand*: (Provide evidence of student enrollment demand, including external estimates. Discuss the extent to which students will be drawn from a pool of students not previously served by the institution. Maximum length 1,000 words.)*

Current Program Interest

UNC Charlotte's **existing AI-related programs and courses** demonstrate strong and sustained student interest:

- **BS in Computer Science with AI, Robotics, and Gaming Concentration:** 359 students currently enrolled, reflecting significant demand for AI-related studies within the Computer Science major.
- **AI-Related Courses:**
    - Seven AI-focused courses recently offered: *Natural Language Processing (Fall)*, *Introduction to Artificial Intelligence (Fall & Spring)*, *Introduction to Machine Learning (Fall & Spring)*, and *Computer Vision (Spring), Intelligent Robotics (Spring), Mobile Robotics (Fall), and Special Topics: AI Literacy (Intermittently)*.
    - **Fall Enrollment:** 323 students across three of the four fall courses.
    - **Spring Enrollment:** 333 students currently enrolled in three of the four spring courses, demonstrating continued demand.

This consistent enrollment across multiple semesters highlights a **clear and growing interest in AI topics**. The sustained demand supports the **viability of a dedicated BS in AI program**, allowing students to develop deeper

[4] EAB. (2025, February). Market pulsecheck for a bachelor's-level artificial intelligence program. See Appendix B for the full study.

[5] EAB. (2025, February). Market pulsecheck for a bachelor's-level artificial intelligence program. See Appendix B for the full study.

expertise beyond an AI concentration.

Future Program Interest

AI's growing relevance across industries makes it an attractive field for students who may not have previously considered a technical degree, broadening the institution's reach. While not the exclusive focus of this degree, our BS in AI has the potential to attract working adults looking to upskill in AI applications relevant to their careers. Our research indicates that UNC Charlotte's AI programs are already drawing older students, particularly in the 31-35 age bracket, as seen in the growth of our AI-focused graduate certificate, *Applied Artificial Intelligence*. However, this certificate program does not serve those in the same age group who lack an undergraduate degree, highlighting a gap in educational opportunities.

Existing Student Interest

Enrollments	**Fall 2020**	**Fall 2021**	**Fall 2022**	**Fall 2023**	**Fall 2024**	**Growth %**
Applied Artificial Intelligence, Graduate Certificate	NA	3	9	16	20	567%
BS in Computer Science, AI, Robotics, & Gaming concentration	268	260	263	286	340	27%
BS in Computer Science, Any concentration	2107	2159	2236	2560	2708	29%

The table above indicates strong growth in demand for AI-branded programs at UNC Charlotte. At the undergraduate level, the enrollment in AI, Robotics, & Gaming concentration in the BS Computer Science program grew by 27%, roughly proportional to the overall growth in the Computer Science major. Conversations within the group of deans of computing colleges in the US, in which UNC Charlotte's Dean Cukic participates regularly, indicate a slow nationwide decline of interest in Computer Science degrees, but an increase in demand for AI coursework and degrees. These are new trends but they correlate with UNC Charlotte's Fall 2025 undergraduate admission data. We feel confident that the investment to develop a new BS in AI degree program is timely and justified.

While there are some synergies between the proposed BS in AI and our existing BS in Computer Science, particularly the AI, Robotics & Gaming (AIRG) concentration, the BS in AI is a more streamlined and specialized program. Unlike the AIRG concentration, which introduces AI concepts later in the curriculum, the BS in AI integrates AI-related coursework beginning in the first year and systematically builds expertise throughout the program. This structure better prepares students for AI-centric careers and aligns with industry needs for specialized AI professionals.

Burtch Works' 2024 *Data Science & AI Professionals Salary Report* found that "mid-career individuals from industry are going back and getting higher education degrees to further differentiate their skill set in a

competitive market."[6] EAB's research found that no statewide institutions and only one regional institution have awarded an AI degree, signaling a significant lack of options for prospective students. As a result, many individuals have turned to private learning and self-directed courses[7] to fill this gap.

With increasing market demand for AI expertise, a largely untapped student population seeking career advancement, and limited degree offerings in North Carolina, UNC Charlotte is well-positioned to take the lead in AI education and workforce development.

IV. Access, Affordability, and Student Success: (*Provide an analysis of the impact of the program on student access and affordability. Maximum length 1,200 words. Include information from College Scorecard. May also include census postsecondary outcomes data, etc.)*

a. Analysis of the impact of the proposed program on student access, including key metrics identified in the UNC System Strategic Plan and statewide initiatives (such as myFutureNC).
b. Analysis of student debt levels for similar programs and programs at the same academic level at the institution.
c. Provide an analysis of indebtedness, repayment, and relationship to potential earnings.

The BS in Artificial Intelligence degree program will be structured similarly to the already existing undergraduate programs in CCI. Any student accepted to UNC Charlotte will be able to declare this major and any student in good standing at the university will be allowed to transfer into the program. We will leverage experience from the BS Computer Science, particularly the concentration in AI, Robotics, and Gaming, that enable and support interested students who may enter college without extensive programming background to succeed in the major. The same Integrated Critical Core curriculum team that supports Computer Science will be tasked with supporting the BS in AI core, which shares some of the same courses. We have ensured that the proposed program is accessible by eliminating any additional barriers or admission requirements.

The proposed program is expected to be similar to the overall student debt load for graduates of $22k[8]. This is lower than both the North Carolina and US average debt load for students. With the high potential incomes of around $84k/year for entry level BS graduates[9], we expect our graduates to be able to repay their debts.

Student Success at CCI: A Commitment to Access and Affordability

At the College of Computing and Informatics (CCI), student success is at the heart of everything we do. We believe that when students are supported effectively, they graduate on time, reducing both debt and financial

[6] Burtch Works. (2024). Data Science & AI Professionals Salary Report (p. 19). Retrieved from https://www.burtchworks.com/salary-2024.

[7] Burtch Works. (2024). Data Science & AI Professionals Salary Report (p. 19). Retrieved from https://www.burtchworks.com/salary-2024.

[8] https://inside.charlotte.edu/news-features/2021-11-16/unc-charlotte-students-graduate-student-loan-debt-lower-state-national

[9] Burtch Works. (2024). Data Science & AI Professionals Salary Report (p. 22). Retrieved from https://www.burtchworks.com/salary-2024

barriers to higher education. By ensuring high graduation rates and a strong foundation in computing, we make degrees in technology more accessible and affordable for all.

To achieve this, we've built a culture of continuous improvement and support. The Center for Education Innovation and Research (CEIR) unit fosters innovative and high-impact teaching practices through workshops and talks, helping faculty refine their approaches to student learning. We also participate in a national program with Northeastern University and others that allow us to systematically identify and remove barriers that prevent students from thriving. These interventions are designed to be evidence-based, systemic, and sustainable without requiring ongoing funding.

CCI also developed the Integrated Critical Core (ICC), a dedicated unit focused on the first two years of our computing degrees, including the new BS in Artificial Intelligence. By providing targeted support regardless of a student's prior experience, we ensure that every student builds a strong foundation in computing. Additionally, our Student Classroom Experience (SCE) Project brings faculty together to analyze student learning experiences, identifying gaps and implementing solutions to enhance student success.

Our commitment to student success is reflected in our strong retention and graduation rates, which have consistently outpaced the university-wide average. Over the past decade, CCI's first-year retention rate for first-time, full-time students has increased from 76.8% (Fall 2009 cohort) to 87.8% (Fall 2019 cohort), surpassing the university's overall increase from 77.5% to 84.7%. Likewise, our five-year graduation rate has risen from 52.5% (Fall 2009 cohort) to 65.3% (Fall 2015 cohort), exceeding the university's graduation rate, which has improved from 47.5% to 62.2%. These gains are a direct result of our targeted student support initiatives, evidence-based teaching practices, and a focus on creating an inclusive and welcoming computing education.

Through these initiatives, CCI ensures that more students succeed, graduate on time, and enter the workforce with confidence—making computing education both accessible and affordable.

V. Societal and Labor Market Demand: *(Provide evidence of societal demand and employability of graduates from each of the following source types. Must include external estimates. Maximum length 1,000 words)*

a. Labor market information (projections, job posting analyses, and wages)
    i. Specific to North Carolina (such as ncworks.gov, nctower.com, or outside vendors such as Burning Glass).
    ii. Available from national occupational and industry projections (such as the U.S. Bureau of Labor Statistics).
b. Projections from professional associations or industry reports (including analysis
c. Other (alumni surveys, insights from existing programs, etc.)

North Carolina Job Prospects

A search for Artificial Intelligence-related job postings on NCWorks.gov[10] reveals a high demand for AI professionals both statewide and in the Charlotte region.

- **Statewide**: Over **2,600 AI-related job listings** across various industries.
- **Charlotte**: More than **1,000 job openings**, demonstrating a **strong local demand**.
- **Top Employers in Charlotte**:
    - **Deloitte** – 142 listings
    - **Innova Solutions** – 23 listings
    - **Accenture** – 22 listings
    - **Truist Bank** – 22 listings
    - **Westinghouse Electric Company, LLC** – 22 listings

These numbers underscore the growing need for AI talent in our region, making a BS in Artificial Intelligence a strategic addition to our university's offerings. Graduates from this program will be well-positioned for careers in AI, data science, and machine learning across multiple sectors, including finance, consulting, technology, and energy.

Industry Growth, National

The AI job market is expanding rapidly, reinforcing the need for dedicated AI education:

- **Lightcast** (2024): "Generative AI job postings have increased **15,625%** from 2021 to 2024," signaling an unprecedented rise in AI-driven roles.[11]
- **U.S. Bureau of Labor Statistics** (November 2024)[12]:
    - **Software development** demand is rising due to AI integration.
    - **Data scientists and machine learning engineers** are becoming critical as AI adoption grows.
    - **AI skills** are now essential in cybersecurity**, IT infrastructure, and digital transformation**.
    - **Healthcare and finance** are experiencing a surge in AI-driven automation and innovation.

With AI reshaping industries and driving job market growth, **a dedicated AI degree program** at UNC Charlotte will equip students with the specialized skills needed to meet evolving workforce demands.

Industry Report Analysis

According to an analysis by EAB[13], employer demand for AI professionals in North Carolina and the regional labor market remains favorable despite slight fluctuations in job postings.

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[10] NCWorks.gov. (2025, February 24). *Job search results for "Artificial Intelligence".* Retrieved from https://www.ncworks.gov

[11] Lightcast. (2024). *The Speed of Skill Change*. Retrieved February 2025, from https://lightcast.io/resources/research/speed-of-skill-change.

[12] Bureau of Labor Statistics, "Industry and Occupational Employment Projections Overview and Highlights, 2023–33," Monthly Labor Review, U.S. Department of Labor, 2024, https://www.bls.gov/opub/mlr/2024/article/industry-and-occupational-employment-projections-overview-and-highlights-2023-33.htm.

[13] EAB. (2025). *Employer Demand Analysis for AI Professionals.* Page 4. See Appendix B for the full study.

- From February 2024 to January 2025, employers posted 6,508 AI-related job listings statewide and 28,224 regionally.
- While the number of postings declined slightly over the past three years (by an average of eight per month statewide and seven regionally), employer demand in the regional market grew by an average of 0.45% per month, with a 0.15% increase in the statewide market.
    - If the total labor market for AI jobs is expanding (e.g., more companies are interested in AI roles), the growth rate can still be positive, even if individual job postings fluctuate.
- Overall, these trends indicate a moderate but optimistic job market outlook for graduates with a bachelor's degree in AI.

Existing Program Insights

Recent enrollment data from UNC Charlotte's AI-related programs indicate a rising demand for AI and machine learning topics, reflecting growing student interest in this field. We have seen this interest demonstrated in the strong interest in our AI courses and existing concentration (see Section III). Since its introduction in 2021, enrollment in the graduate certificate in Applied Artificial Intelligence has increased over six-fold, with the largest growth among students aged 31-35 and exclusively domestic students. Similarly, the undergraduate concentration in AI, Robotics, and Gaming has grown by 24% in the same period.

Lightcast's report, *The Speed of Skill Change*, notes that "tech jobs have been notably disrupted by AI skills, including in data roles (like Data Scientists, Analytics Managers, and Data Engineers) [and] programming roles (like Computer Scientists and Software Developers)."[14] This disruption signals that a concentration within a Data Science or Computer Science degree is no longer sufficient; instead, a fully established degree pathway is required to meet evolving market needs.

This sustained enrollment growth highlights a clear and increasing demand for AI education. Establishing a dedicated BS in AI will provide students with a structured pathway to develop expertise in this critical field, ensuring UNC Charlotte continues to meet the evolving educational needs of its students.

VI. Costs, Funding, and Budget (*Maximum length 1,200 words)*

Adding a new degree program will cost the institution some amount of money and will potentially generate new revenues. Calculating the costs and identifying the funding sources associated with implementation of a new program requires several institutional offices (e.g., academic affairs, finance, institutional research, enrollment management) to collaborate to present an accurate estimate.

a. Complete and attach the *UNC System Academic Program Planning Financial Worksheet* showing <u>all</u> costs required and revenues generated for each of the first five years of the program. Provide a budget narrative for each year addressing the following:

    i. UNC Academic Program Costs

    Faculty costs include all faculty assigned to the proposed program, including faculty

[14] Lightcast. (2024). *The Speed of Skill Change*. Retrieved February 2025, from https://lightcast.io/resources/research/speed-of-skill-change.

serving as program directors, coordinators, department chairs, etc. funded in the 101 instructional budget code. If an existing faculty member is reassigned to the program, the salary is reflected as a reallocated cost. New faculty salaries need to be competitive for the discipline, and figures should include all applicable fringe (e.g., retirement, medical). If the proposed program will hire new faculty, it is a new cost.

Graduate Assistant costs are identified either as new or reallocated, as appropriate, and should include all stipends, tuition remission, and benefits, as applicable.

EHRA Non-Faculty positions include non-instructional academic support costs directly associated with running the program, including amounts associated with the Dean's office, research support, etc. This should include salaries and all applicable fringe.
SHRA Non-Faculty positions includes all positions specific costs associated with the new program. This includes the additional staff needed to organize applications, prepare for the proposed program, and for general administration of the proposed program. New staff or purchases of new equipment should be adequate to support the stated goals and enrollments for the proposed program. Other program costs identified in the proposal should be realistic.

The proposed BS in Artificial Intelligence program curriculum takes advantage of existing computer science courses and labs that are already offered as a part of our BS in Computer Science and BA in Computer Science. Twenty percent of the curriculum, 9 courses, will be developed as new and distinct from the BS in Computer Science with a concentration in Artificial Intelligence, Robotics, and Gaming. There is no new general education course required for the proposed curriculum. As a result, new faculty lines are requested primarily for new course development and increased student enrollment, but no new lab equipment, or new facilities are requested for the initial program offering.

The forecasted enrollment growth and the 9 new courses will increase faculty teaching load. To efficiently handle the increased load, 6 new teaching faculty positions are requested by the end of Year 5. Expected enrollment will necessitate 1 new teaching faculty each year until year 5, when 2 new faculty are requested. We assume that new students will take, on the average, 9 credit hours in the College of Computing each semester, either in newly developed AI courses or in existing Computer Science courses that are part of the BS AI curriculum. This is a realistic assumption, given program requirements. With a class size of up to 75, and the projected student growth shown in the table below, 6 new sections will be needed in Year 1. This is the typical workload of a teaching faculty member. To further support instruction, we are requesting resources for Teaching Assistants (TAs). We assume a student-to-TA ratio of 40:1, with approximately 60% of TAs being undergraduate students and 40% being MS students. For Year 1 this implies the request for 6 undergraduate and 3 MS TAs. Additionally, PhD TAs would serve as "Lead TAs", i.e., lab coordinators and instructors for introductory courses that have a lab component. These assumptions lead to the request for 6 new teaching faculty members, 60 new TAs (36 plus 24) and 4 PhD TAs by Year 5, given the expected enrollment growth.

	Year 1	Year 2	Year 3	Year 4	Year 5
Student Enrollment	55	122	188	294	400
Teaching Faculty	1	2	3	4	6
UG TAs	6	12	18	27	36
MS TAs	3	7	11	18	24
PhD TAs	1	2	3	3	4

In addition to faculty and TAs, the program will require one dedicated Student Advisor and ½ FTE Student Services Specialist. Program administration will require a ½ FTE month stipend for the Program Director. There are, in addition, expenses for faculty members teaching General Education courses outside of the College of Computing and Informatics. Minor expenses related to supplies, materials, and student scholarships are included. Lastly, an overhead of 50% is budgeted to pay for Library services, Office of Assessment and Accreditation, Human Resources, Information Technology, utilities, facilities upkeep, classroom renovations, etc., all of which is detailed in the attached Academic Program Planning Financial Worksheet, Appendix A.

In summary, the total estimated new costs of the program are approximately $7.9M over the initial five years, as detailed in the attached Academic Program Planning Financial Worksheet, Appendix A.

ii. UNC Academic Program Revenues

Funding sources may include enrollment growth formula funding, other state appropriation, regular tuition, tuition differential, general fees, special fees, reallocation of existing resources, federal funding, and other funding (such as awarded grants or gifts). The total projected revenue from the above categories should allow the proposed program to become self-sufficient within five years.

When estimating funding for new programs, institutions should take into account that students switching programs do not generate additional enrollment growth formula funds. For example, if a program projects enrollment of 20 students, but 12 of them switched into the program from an existing program at the institution, then only 8 of the students would generate additional formula funding.

Reallocation of Existing Resources includes the salary of faculty reassigned who may be partially or wholly reallocated to the new program. Explain how the current teaching obligations of those faculty are reallocated and include any faculty replacement costs as program costs in the budget. If substantial funds are reallocated, explain how existing undergraduate and graduate programs will be affected.

Federal Funding (In-hand only) refers to federal monies from grants or other sources

currently in hand. Do not include federal funding sought but not secured. If anticipated federal funding is obtained, at that time it can be substituted for funds designated in other funding categories. Make note within the text of the proposal of any anticipated federal funding. Provide evidence of sustainability after federal funds have been exhausted.

Our analysis predicts a total enrollment of 400 students by Year 5, with an estimated 50 major-change students from existing programs. The 50 major change students may come from many existing majors, and that may result in slight change in credit hours in their original majors. Nevertheless, given the overall enrollment growth at UNC Charlotte, such a reduction in credit hours is unlikely. Using current rates, the total revenue from tuition and fees over five years is computed as $12.1M, as detailed in the attached Academic Program Planning Financial Worksheet, Appendix A. As the program grows, major fees will be used to support teaching, student services, and recruiting and outreach efforts. The tuition and appropriation revenues are determined at an institutional level. The numbers reflected may or may not reflect an actual change in the university budget.

b. Based on the institution's estimate of available existing resources or expected non-state financial resources that will support the proposed program (e.g., federal support, private sources, tuition revenue, etc.), please describe the following:

i. How does the institution budget and allocate enrollment growth revenues? Is this program expected to generate new enrollment growth for the institution? If so, how will funds be allocated to the proposed program or be used to further other institutional priorities?

The proposed program is expected to generate new enrollment growth for UNC Charlotte. Increases in enrollment as well as Student Credit Hours (SCH) are reviewed by the Dean's office and examined within the context of the UNC System Office funding formula and University priorities when determining allocation of enrollment growth funds and general tuition and fees. Funds received at the department level will be used to support teaching, student services, and recruiting and outreach in proportion to the enrollment growth.

ii. Will the institution seek other additional state appropriations (both one-time and recurring) to implement and sustain the proposed program? If so, please elaborate.

No.

iii. Will the institution require differential tuition supplements or program-specific fees? If so, please elaborate.

1. *State the amount of tuition differential or program-specific fees that will be requested.*
2. *Describe specifically how the campus will spend the revenues generated.*

The major fee currently in place in the College of Computing and Informatics is $225 per year[15]. We will request an equivalent fee for this new program. We will invest this generated revenue to support student success

[15] https://ninercentral.charlotte.edu/wp-content/uploads/sites/803/2023/09/Undergraduate_MainCampus_2324.pdf

initiatives.

c. Provide a description of how the program can be implemented and sustained If enrollment increase funding, differential tuition, or other state appropriations noted in the budget templates are not forthcoming.

This program is not dependent on differential tuition or special state appropriations. Program expansion would be slowed in the absence of enrollment growth funding to fully support the anticipated demand.

d. If this is an online program offered in partnership with an OPM, describe the nature of the relationship, length of contract, funding model (e.g., revenue share, fee for service), and plans for sustainability beyond the initial contract period.

Not applicable.

VII. For Research Doctoral Programs Only:

Describe the following (maximum length 1,000 words):

a. The research and scholarly infrastructure in place (including faculty) to support the proposed program.
b. Any aspects of financing the proposed new program not included in the above section.
c. State the number, amount, and source of proposed graduate student stipends and related tuition benefits that will be required to initiate the program.

Not applicable.

VIII. For Professional Practice Doctoral Programs Only:

Describe the following (maximum length 1,000 words):

a. Discussion of external requirements, including professional licensure or accreditation requirements related to the proposed program. If the program is designed or will be marketed to lead to professional licensure, which state(s) has the institution determined the program meets professional licensure requirements for?
b. The academic and professional infrastructure in place (including faculty) to support the proposed program.
c. Any aspects of financing the proposed new program not included in the above section.
d. State the number and source of required clinical/practical placements, if applicable. Determine whether it is the students' or the institution's responsibility to secure clinical/practical placements and discuss how that expectation will be communicated to students and prospective students. Describe how the institution will ensure that proposed clinical/practical sites are appropriate.

Not applicable.

Appendices:

A: UNC System Academic Program Planning Financial Worksheet

B: EAB Market Insights Report

IX. Contact: (List the names, titles, e-mail addresses and telephone numbers of the person(s) responsible for planning the proposed program.)

Position Title	Name	E-mail Address	Telephone
Dean, College of Computing and Informatics	Bojan Cukic	bcukic@charlotte.edu	704-687-8422
Chair, Department of Computer Science	Min Shin	mcshin@charlotte.edu	704-687-8578
Associate Dean for Undergraduate Programs and Student Success, College of Computing and Informatics	Harini Ramaprasad	hramapra@charlotte.edu	704-687-1737
Director of Assessment, Planning, and Accreditation	Colleen Karnas-Haines	ckarnash@charlotte.edu	704-687-8370

Signatures. This Request for Preliminary Authorization has been reviewed and approved by the appropriate institutional committees and authorities and has my support.

Position Title	Signature	Date
Chancellor	DocuSigned by: Sharon Gaber 2FF1496738C7414...	03/26/2025 | 6:04 PM EDT
Provost	DocuSigned by: Jennifer Troyer CB79653C3A82433...	03/26/2025 | 2:06 PM EDT

(Only complete below for partner institution if this is a joint degree program proposal)

Position Title	Signature	Date
Chancellor		
Provost		

	Current Program Sources (if applicable)	Rate	Year 0 (Start Up)	1st Year	2nd year	3rd Year	4th Year	5th Year	TOTALS
1	General Fund Appropriation								$ -
2	NC Promise Appropriation								$ -
3	*Resident Enrollment (FTE)*			25	50	50	50	25	
4	Regular Resident Tuition (Annual Rate)	$ 3,812	$ -	$ 95,300	$ 190,600	$ 190,600	$ 190,600	$ 95,300	$ 762,400
5	*Nonresident Enrollment (FTE)*			2	4	4	4	2	
6	Regular Nonresident Tuition (Annual Rate)	$ 19,065	$ -	$ 38,130	$ 76,260	$ 76,260	$ 76,260	$ 38,130	$ 305,040
7	Tuition Differential (Annual Rate)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
8	Special Fees	$ 3,427	$ -	$ 92,529	$ 185,058	$ 185,058	$ 185,058	$ 92,529	$ 740,232
9	External Funding (In-Hand Only)								$ -
10	Other Funding (Identify)								$ -
11	**Total Current Sources**		$ -	$ 225,959	$ 451,918	$ 451,918	$ 451,918	$ 225,959	$ 1,807,672
	Proposed New Program Sources								
12	*Incremental Resident SCH*			600	1,512	2,976	5,280	8,232	
13	Enrollment Funding Appropriation (CIP 11.0102)	$ 386	$ -	$ -	$ 115,800	$ 407,616	$ 866,184	$ 1,593,408	$ 2,983,008
14	*Resident Enrollment (FTE)*			25	63	124	220	343	
15	Regular Resident Tuition (Annual Rate)	$ 3,812	$ -	$ 95,300	$ 240,156	$ 472,688	$ 838,640	$ 1,307,516	$ 2,954,300
16	NC Promise Appropriation (Resident)		$ -	$ -	$ -	$ -	$ -	$ -	$ -
17	*Nonresident Enrollment (FTE)*			3	5	10	20	30	
18	Regular Nonresident Tuition (Annual Rate)	$ 19,065	$ -	$ 57,195	$ 95,325	$ 190,650	$ 381,300	$ 571,950	$ 1,296,420
19	NC Promise Appropriation (Nonresident)		$ -	$ -	$ -	$ -	$ -	$ -	$ -
20	Tuition Differential (Annual Rate)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
21	Special Fees	$ 3,427	$ -	$ 95,956	$ 233,036	$ 459,218	$ 822,480	$ 1,278,271	$ 2,888,961
22	External Funding (In-Hand Only)								
23	Other Funding (Identify)- major fees	225		6,300	15,300	30,150	54,000	83,925	$ 189,675
24	**Total New Sources**		$ -	$ 254,751	$ 699,617	$ 1,560,322	$ 2,962,604	$ 4,835,070	$ 10,312,364
25	**Total Proposed Program Sources**		$ -	$ 480,710	$ 1,151,535	$ 2,012,240	$ 3,414,522	$ 5,061,029	$ 12,120,036

Comments

Check	55	122	188	294	400
Goal	55	122	188	294	400

Chief Financial Officer

Name Richard Amon

Date 03/26/2025 | 4:18 PM EDT

Signature

X DocuSigned by: Richard Amon 03B88EFF44BD4C5...

		Year 0 (Start Up)	1st Year	2nd year	3rd Year	4th Year	5th Year	TOTALS
	Current Program Uses (if applicable)							
1	Tenure/Tenure-Track Faculty							$ -
2	Non Tenure-Track Faculty							$ -
3	Graduate Student Support							$ -
4	Non-Faculty Positions							$ -
5	Student Support (Scholarships)							$ -
6	Libraries							$ -
7	Supplies and Materials		10,000					$ 10,000
8	Travel, Communications, and Fixed Charges							$ -
9	Equipment and Technology							$ -
10	Facility Repair and Renovation							$ -
11	Other (Identify)							$ -
12	**Total Current Uses**	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ 10,000
	Proposed New Program Uses							
13	Tenure/Tenure-Track Faculty	-						$ -
14	Non Tenure-Track Faculty	-	129,705	259,410	389,115	518,820	778,230	$ 2,075,280
15	Graduate Student Support	-	79,245	170,490	261,735	345,735	460,980	$ 1,318,185
16	Non-Faculty Positions	-	114,764	114,764	114,764	114,764	114,764	$ 573,820
17	Student Support (Scholarships)	-	50,000	50,000	50,000	50,000	50,000	$ 250,000
18	Libraries	-						$ -
19	Supplies and Materials	-	5,000	5,000	5,000	5,000	5,000	$ 25,000
20	Travel, Communications, and Fixed Charges	-						$ -
21	Equipment and Technology	-	10,000	10,000	10,000	10,000	10,000	$ 50,000
22	Facility Repair and Renovation	-						$ -
23	Facility New Construction or Expansion	-						$ -
24	Other (Identify)	-	64,822	122,422	180,022	266,422	352,822	$ 986,511
25	**Total New Uses**	$ -	$ 453,536	$ 732,086	$ 1,010,636	$ 1,310,741	$ 1,771,796	$ 5,278,796
	Overhead (HR, startup, IT, utilities, classroom renov/tech, etc)		$ 226,768	$ 366,043	$ 505,318	$ 655,371	$ 885,898	$ 2,639,398
26	**Total Proposed Program Uses**	$ -	$ 690,304	$ 1,098,129	$ 1,515,954	$ 1,966,112	$ 2,657,694	$ 7,928,194

Comments

Chief Financial Officer

Name Richard Amon

Date 03/26/2025 | 4:18 PM EDT

Signature X DocuSigned by: Richard Amon 03B88EFF44BD4C5...

EAB

EAB MARKET INSIGHTS

Market Pulsecheck for a Bachelor's-Level Artificial Intelligence Program

Completed for the University of North Carolina at Charlotte
February 2025

Research Associate

Grace Warner

Research Manager

Emma Veon

Table of Contents

Market Pulsecheck Overview

An evaluation of employer demand for graduates from bachelor's-level artificial intelligence programs in statewide, regional, and national markets, and of student demand for similar programs.

Analysis Includes:

- Job Posting Trends
- Top Occupations
- Top Skills
- Education Levels
- Degree Completion Trends

This analysis considered demand in areas defined as:

- Statewide: North Carolina
- Regional: District of Columbia, Maryland, South Carolina, and Virginia
- National: the United States

Market Pulsecheck Options for Next Steps

Following this analysis, the requesting partner can:

- Contact your Strategic Leader to schedule a call with the EAB research team to review the report.
- Choose to discontinue the research, if the leadership is able to make a decision based on this analysis and other institutional research.
- Continue the analysis. A final report of the continued research will address credential design and curricular recommendations.

Though Limited Student Demand Offers an Uncertain Competitive Outlook in Profiled Regions, a Healthy Labor Market Indicates Opportunity for New Program Success

Preliminary Program Outlook

Favorable employer demand indicates program graduates will encounter ample opportunities in the statewide and regional labor markets. Statewide and regional employer demand trends signal a healthy market for bachelor's-level artificial intelligence professionals. From February 2024 to January 2025, employers advertised a moderate number of relevant job postings in both statewide and regional labor markets (6,508 and 28,224, respectively). Between February 2022 and January 2025, relevant employer demand declined an average actual eight job postings per month statewide, and seven postings per month regionally. However, during the same period, employer demand in the regional market grew an average monthly 0.45% and 0.15% in the statewide market. Overall, a moderate number of opportunities signals an optimistic market outlook.

No statewide institutions and only one regional institution reported completions under the profiled CIP code. Limited data prevents a complete evaluation of market opportunity in the profiled regions.

Increasing national completions indicate an opportunity for new program development; however, limited student demand and strong competitors may challenge sustainable growth. Rising student demand (net growth of 91 completions) across the 2018-2019 and 2022-2023 academic years bodes well. Notably, Carnegie Mellon University reported the most significant growth between the 2018-2019 and 2022-2023 academic years (net increase of 33 completions) and emerged as the market leader nationally in the most recent profiled year, reporting 33 completions (30.28% market share). Further, 20% of institutions reported 62.39% market share in the 2022-2023 academic year, signaling market concentration. While market concentration and strong competitors signal a challenging competitive landscape, increasing student demand indicates potential for program launch. However, low completions suggest incoming programs will likely see small class sizes.

Research Limitations Summary

Due to limited statewide and regional competitive landscape data, we included national competitive trends in the report to illustrate student interest in relevant programming across the United States. To see our complete methodology, please see pages 15-17.

Labor Market Intelligence

Statewide Analysis of Job Postings for Bachelor's-Level Artificial Intelligence Professionals

Statewide employer demand trends indicate a modest but favorable market for bachelor's-level artificial intelligence professionals. From February 2024 to January 2025, employers advertised a moderate number of relevant job postings (6,508). Between February 2022 and January 2025, relevant employer demand grew an average monthly 0.15%; however, this translates to an average actual decline of eight job postings monthly. During the same period, demand for all bachelor's-level professionals declined 1.05% on average monthly, indicating graduates will likely enter a more favorable market than average. Relatively stable employer demand and a moderate number of relevant job postings over the last 12 months indicate graduates will likely find employment in the statewide market.

+0.15%

Average Monthly Demand Growth

February 2022 - January 2025, Statewide Data

- Average monthly decline of eight job postings.
- During the same period, demand for all bachelor's-level professionals declined 1.05%.

1,191 postings

Average Monthly Demand

February 2022 - January 2025, Statewide Data

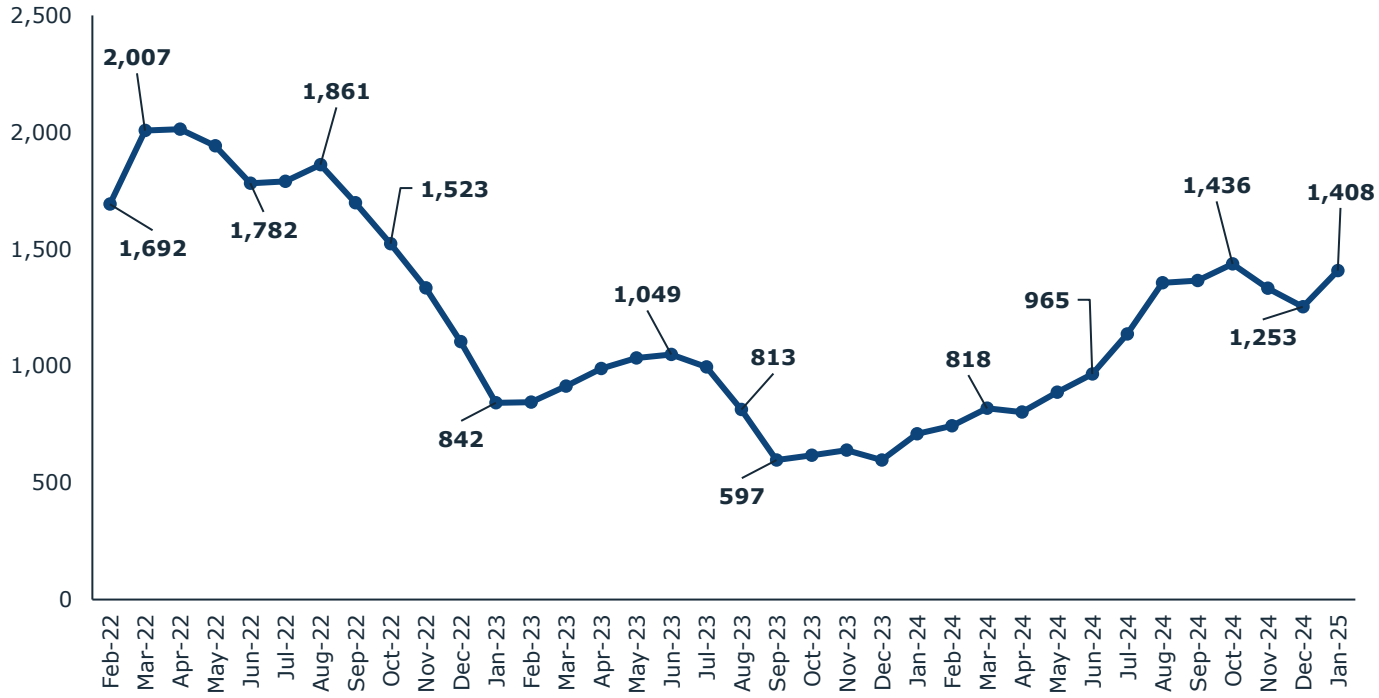
6,508 postings

Relevant Jobs Posted in the Past Year

February 2024 - January 2025, Statewide Data

Job Postings for Bachelor's-Level Artificial Intelligence Professionals

February 2022 - January 2025, Statewide Data



Source: EAB analysis. Lightcast.

Regional Analysis of Job Postings for Bachelor's-Level Artificial Intelligence Professionals

Regional employers demonstrated a moderate but increasing need over the profiled period, advertising 28,224 postings between February 2024 and January 2025. Over the last 36 months, regional employer demand increased by an average monthly 0.45%, while demand for all bachelor's-level professionals declined an average monthly 0.80%. Moderate but growing student demand indicates graduates will enter an expanding labor market.

+0.45%

Average Monthly Demand Growth

February 2022 - January 2025, Regional Data

- Average monthly growth of seven job postings.
- During the same period, demand for all bachelor's-level professionals declined 0.80%.

5,430 postings

Average Monthly Demand

February 2022 - January 2025, Regional Data

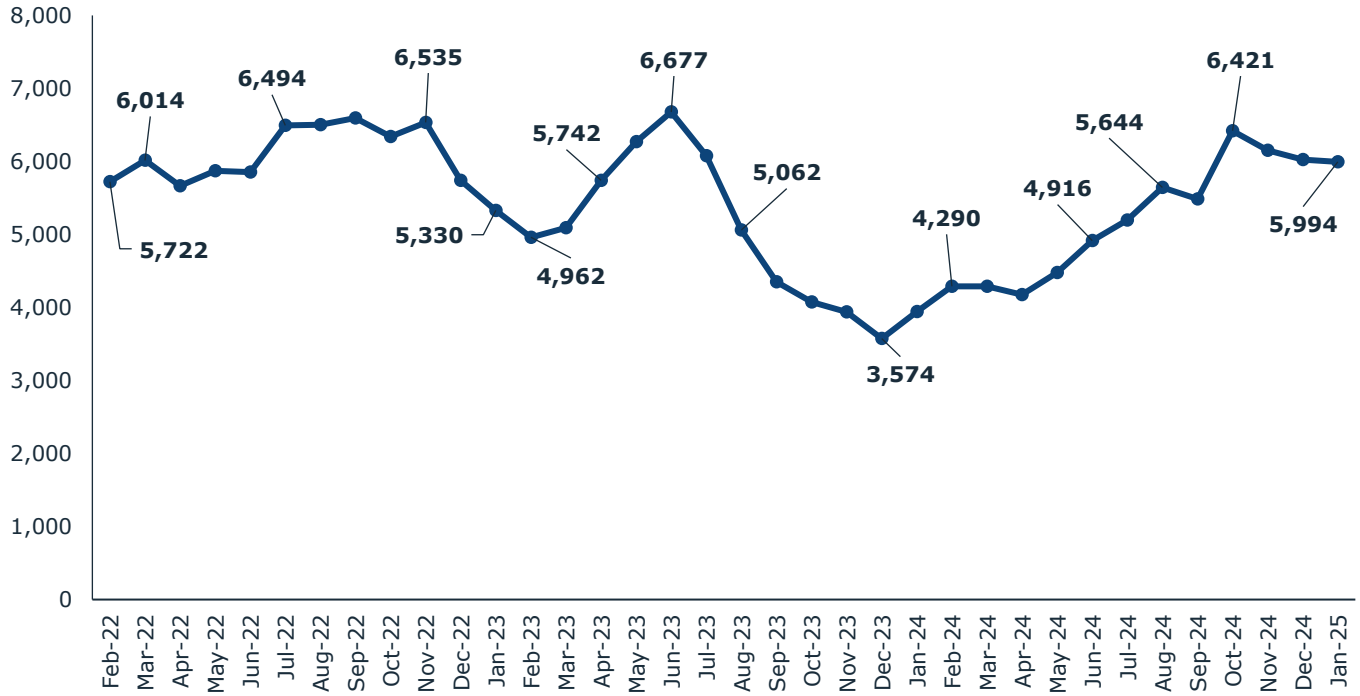
28,224 postings

Relevant Jobs Posted in the Past Year

February 2024 - January 2025, Regional Data

Job Postings for Bachelor's-Level Artificial Intelligence Professionals

February 2022 - January 2025, Regional Data



Source: EAB analysis. Lightcast.

Statewide Analysis of Job Postings and Future Employment for Artificial Intelligence Professionals

Employment is projected to increase faster than average in all of the top five occupations between 2025 and 2035, indicating an optimistic outlook for future job growth. Job titles listed under the occupation Computer Occupations, All Other include Product Owners, Cybersecurity Engineers, and Cloud Architects.

While these occupations represent the most common occupations appearing in job postings for bachelor's-level artificial intelligence professionals, projected employment data considers all jobs within an occupation at all degree levels.

Top Occupations Across Job Postings for Bachelor's-Level Artificial Intelligence Professionals

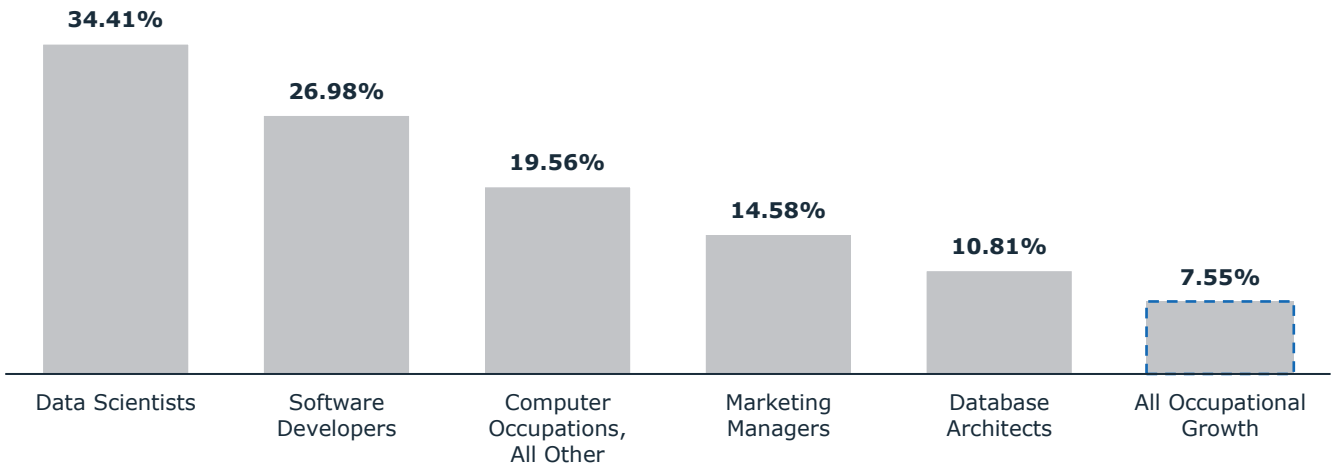
February 2024 - January 2025, Statewide Data

n = 6,508 job postings

Occupation	Percent of Relevant Job Postings within Occupation	Number of Relevant Job Postings within Occupation
Data Scientists	18.12%	1,179
Software Developers	17.73%	1,154
Computer Occupations, All Other	12.77%	831
Marketing Managers	5.01%	326
Database Architects	4.98%	324
Database Administrators	3.76%	245
Management Analysts	2.52%	164
Financial Risk Specialists	2.30%	150
Market Research Analysts and Marketing Specialists	2.01%	131
General and Operations Managers	1.61%	105

Projected Employment in Top Occupations[1]

2025 - 2035, Statewide Data



1) Top occupations refer to the occupations in which employers most often seek relevant professionals.

Source: EAB analysis. Lightcast.

Regional Analysis of Job Postings and Future Employment for Artificial Intelligence Professionals

Regional employment is projected to increase faster than average for four of the top five occupations in the next decade. This indicates employment opportunities for graduates will likely increase in the coming years. The Bureau of Labor Statistics projects an increase in demand for the occupation Data Scientists due to growing need for data scientists to mine and analyze large amounts of information and data required for business decisions.

While these occupations represent the most common occupations appearing in job postings for bachelor's-level artificial intelligence professionals, projected employment data considers all jobs within an occupation at all degree levels.

Top Occupations Across Job Postings for Bachelor's-Level Artificial Intelligence Professionals

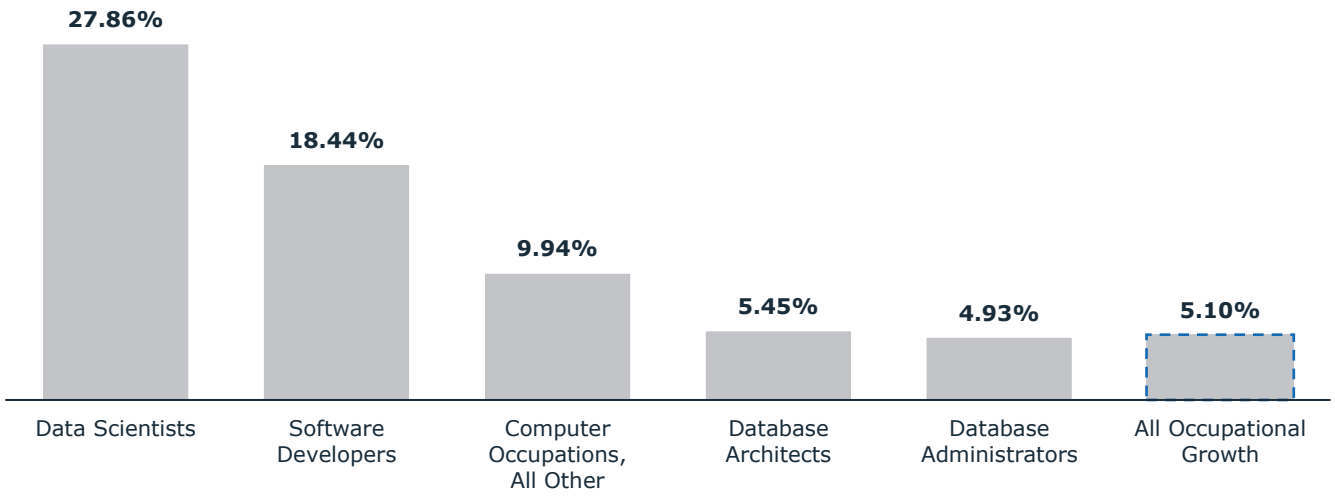
February 2024 - January 2025, Regional Data

n = 28,224 job postings

Occupation	Percent of Relevant Job Postings within Occupation	Number of Relevant Job Postings within Occupation
Software Developers	21.75%	6,138
Data Scientists	19.90%	5,616
Computer Occupations, All Other	13.57%	3,829
Database Administrators	4.42%	1,247
Database Architects	3.96%	1,117
Marketing Managers	2.58%	729
Management Analysts	1.95%	551
Project Management Specialists	1.54%	435
Web Developers	1.39%	391
Web and Digital Interface Designers	1.30%	368

Projected Employment in Top Occupations[1]

2025 - 2035, Regional Data



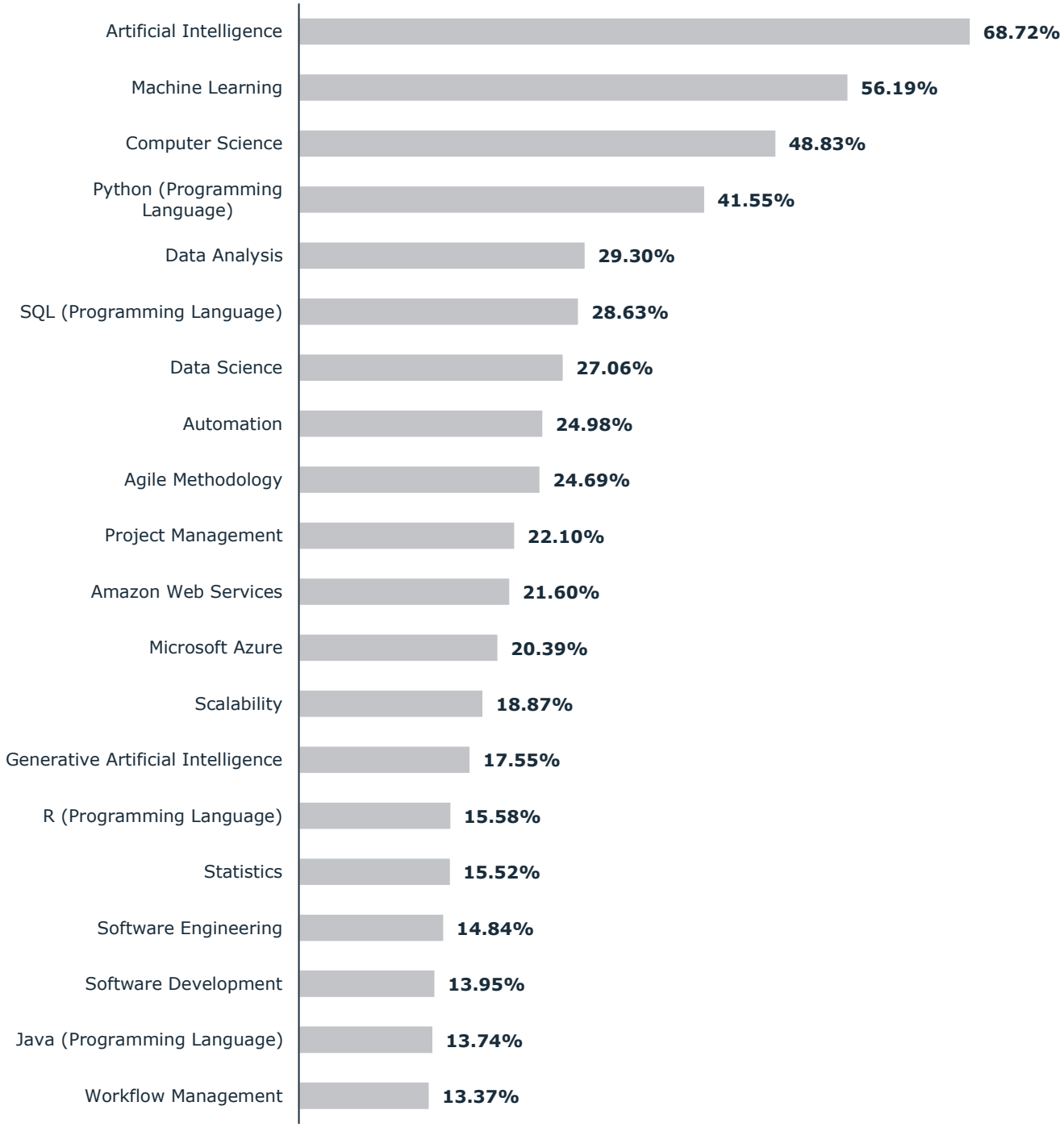
1) Top occupations refer to the occupations in which employers most often seek relevant professionals.

Source: EAB analysis. Lightcast.

Top Skills in Job Postings for Bachelor's-Level Artificial Intelligence Professionals

February 2024 - January 2025, Statewide Data

n = 6,508 job postings

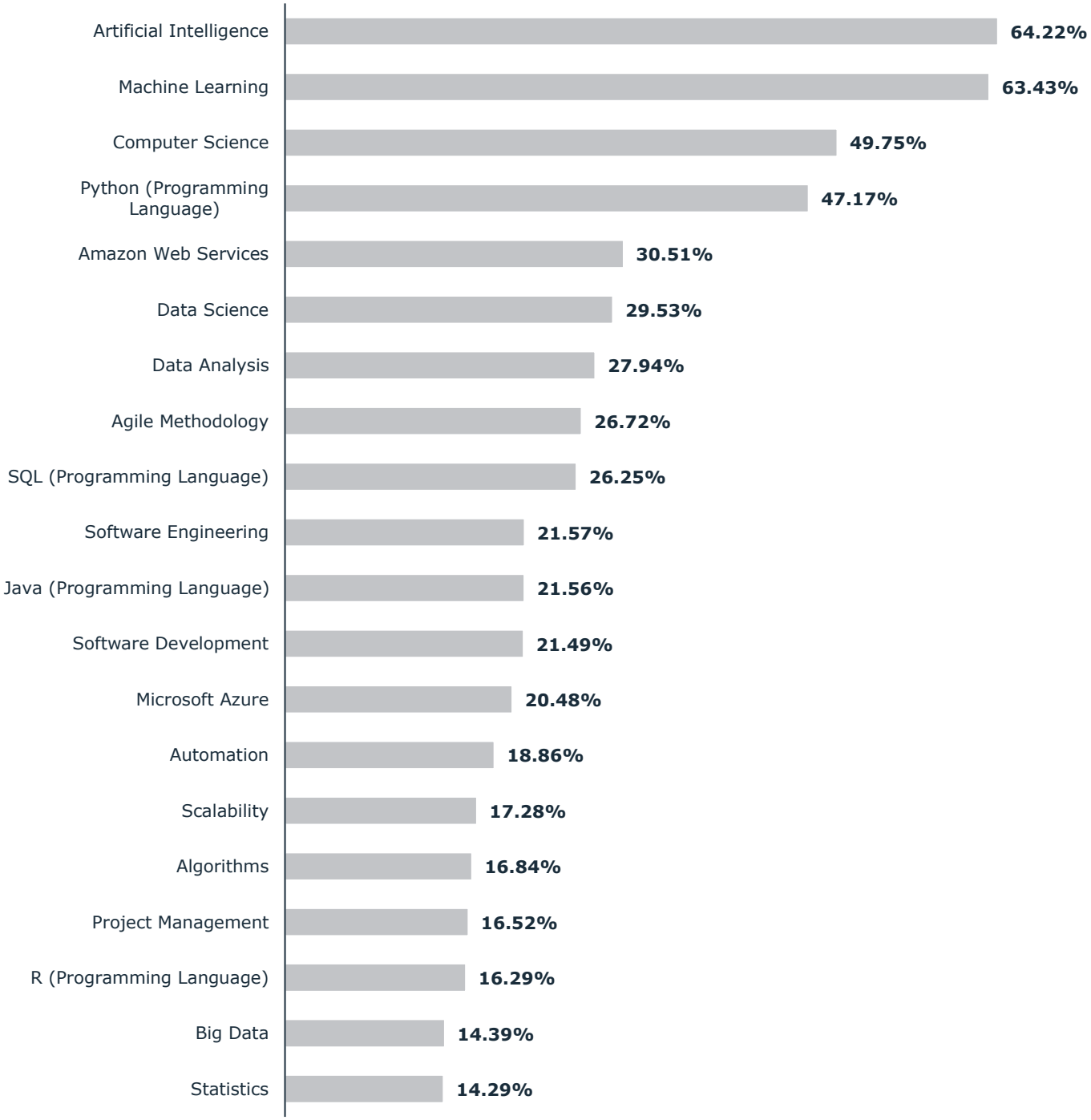


Source: EAB analysis. Lightcast.

Top Skills in Job Postings for Bachelor's-Level Artificial Intelligence Professionals

February 2024 - January 2025, Regional Data

n = 28,224 job postings

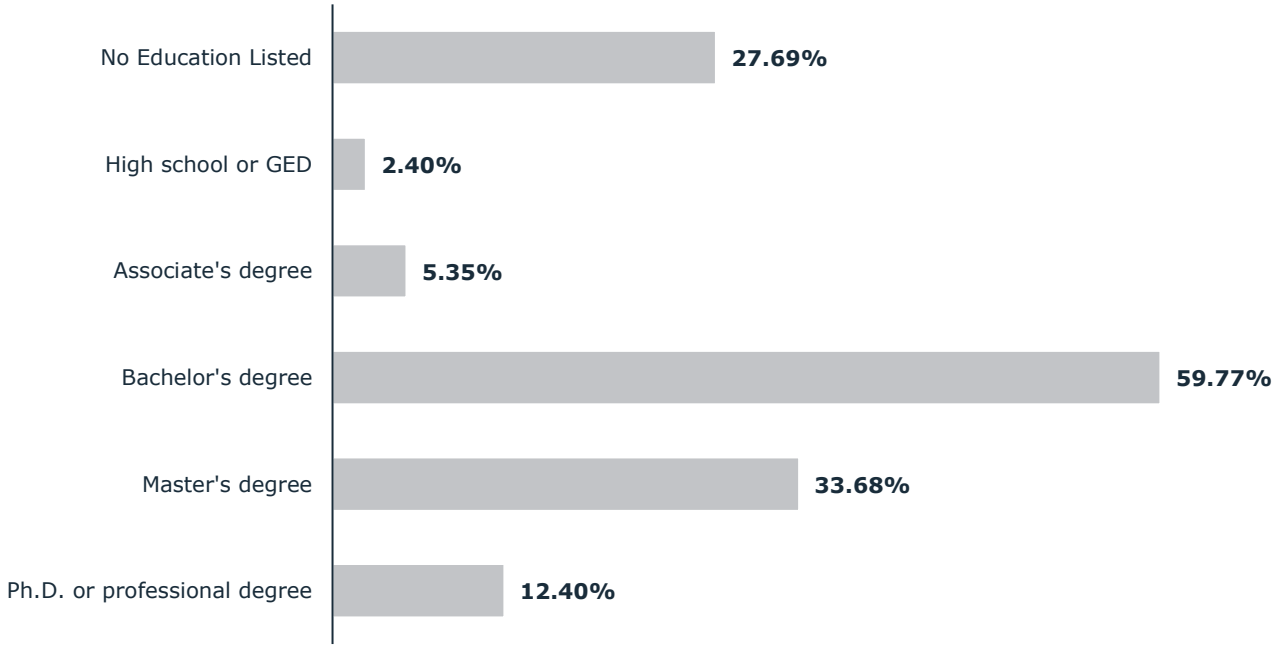


Source: EAB analysis. Lightcast.

Education Levels Requested of Artificial Intelligence Applicants[1]

February 2024 - January 2025, Statewide Data

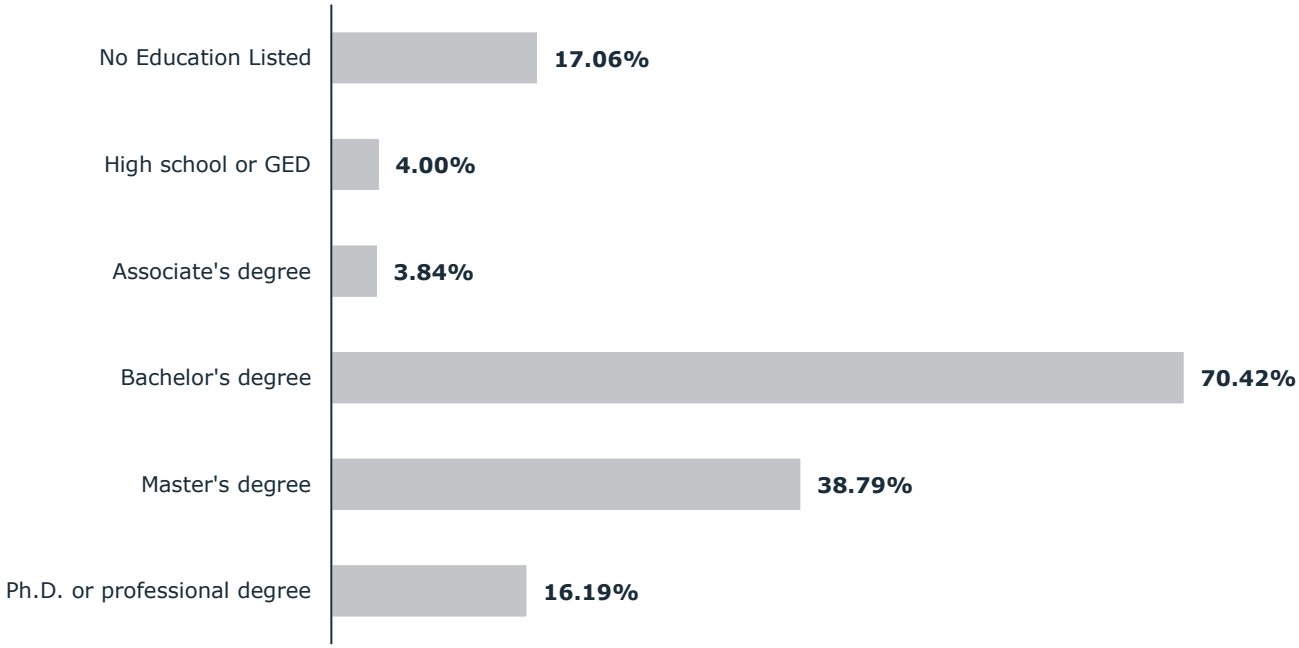
n = 10,888 job postings



Education Levels Requested of Artificial Intelligence Applicants[1]

February 2024 - January 2025, Regional Data

n = 40,077 job postings



1) The n-value reflects the number of job postings requesting any degree level artificial intelligence applicants rather than the number of postings requesting only those at the focus degree level.

Source: EAB analysis. Lightcast.

Competitive Intelligence

Regional Analysis of Bachelor's-Level Artificial Intelligence Completions Under CIP Code Artificial Intelligence (11.0102)

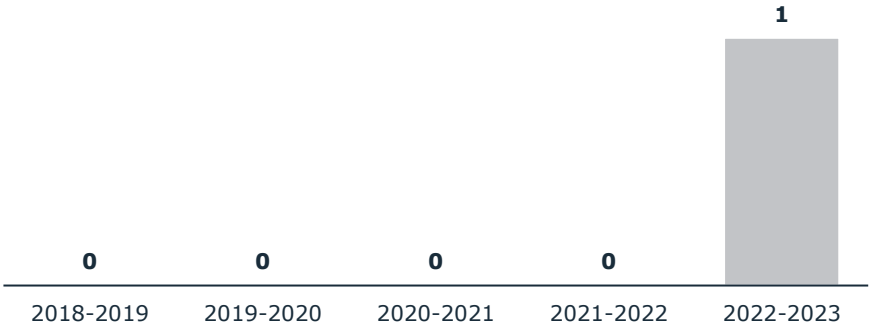
There were no reported completions between the 2018-2019 and 2022-2023 academic years in the regional market. Marymount University reported zero completions in the 2022-2023 academic year. Overall, limited data and student demand indicate an inconclusive competitive landscape outlook.

Completions Reported Over Time

2018-2019 to 2022-2023 Academic Years, Regional Data

Institutions Reporting Completions Over Time

2018-2019 to 2022-2023 Academic Years, Regional Data



0.00%

Average Annual Completions Growth

2018-2019 to 2022-2023 Academic Years, Regional Data

- During the same period, the number of institutions reporting completions grew by a net of one institution.

0.00%

Institutions Reporting Completions with a 100% Distance-Delivery Option

2022-2023 Academic Year, Regional Data

Institution Reporting Completions

2018-2019 to 2022-2023 Academic Years, Regional Data

Institution	Reported Completions, 2018-2019 Academic Year	Market Share, 2018-2019 Academic Year	Reported Completions, 2022-2023 Academic Year	Market Share, 2022-2023 Academic Year	Completions Reported via Distance-Delivery, 2022-2023 Academic Year
Marymount University	Not Offered	Not Offered	0	0.00%	No

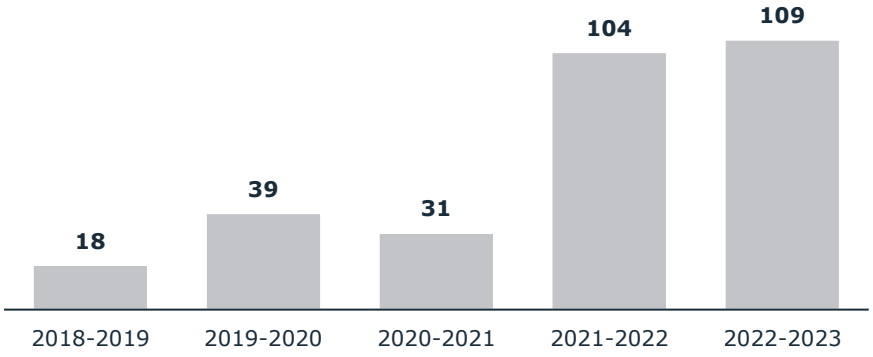
Source: EAB analysis. National Center for Education Statistics.

National Analysis of Bachelor's-Level Artificial Intelligence Completions Under CIP Code Artificial Intelligence (11.0102)

The number of national completions experienced a jump of 73 completions between the 2020-2021 and 2021-2022 academic years, indicating dramatic growth in student demand. During the 2018-2019 to 2022-2023 academic years, competition also increased rapidly, rising an average 48.39% annually (net of 15 institutions). Though fast-rising completions signal a favorable competitive market, a limited number of mean and median completions (5.74 and 2.00, respectively, in the 2022-2023 academic year) indicates small class sizes among national programs.

Completions Reported Over Time

2018-2019 to 2022-2023 Academic Years, National Data



84.11%

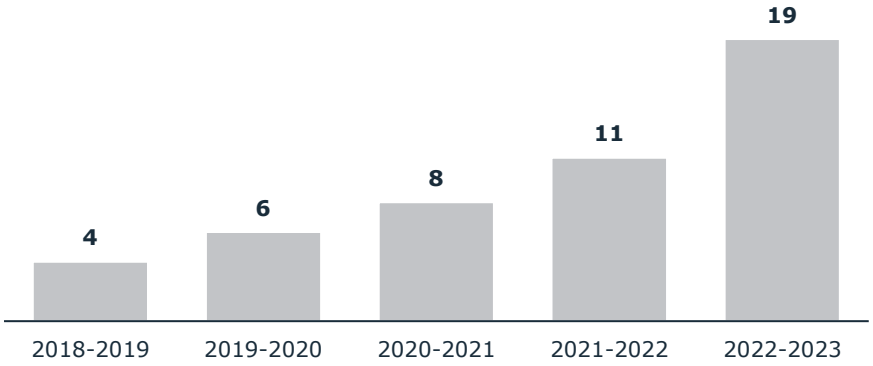
Average Annual Completions Growth

2018-2019 to 2022-2023 Academic Years, National Data

- During the same period, the number of institutions reporting completions grew by 48.39% on average annually.

Institutions Reporting Completions Over Time

2018-2019 to 2022-2023 Academic Years, National Data



10.53%

Institutions Reporting Completions with a 100% Distance-Delivery Option

2022-2023 Academic Year, National Data

Completions per Institution Reporting

2018-2019 and 2022-2023 Academic Years, National Data

Source: EAB analysis. National Center for Education Statistics.

National Analysis of Bachelor's-Level Artificial Intelligence Completions Under CIP Code Artificial Intelligence (11.0102)

Full Sail University reported all 18 national completions in the 2018-2019 academic year but trailed behind Carnegie Mellon University in the 2022-2023 academic year, reporting the second-highest number of completions (19). Carnegie Mellon University reported the most significant growth over this same period and emerged as the market leader in the most recent profiled year, reporting 33 completions (30.28% market share). The top 20% of institutions reported 62.39% market share in the 2022-2023 academic year, signaling market concentration. While rising student interest in relevant programming bodes well, strong and growing competition may challenge new program growth.

Institutions with Most Reported Completions

2018-2019 and 2022-2023 Academic Years, National Data

Institution	Reported Completions, 2018-2019 Academic Year	Market Share, 2018-2019 Academic Year	Reported Completions, 2022-2023 Academic Year	Market Share, 2022-2023 Academic Year	Completions Reported via Distance-Delivery, 2022-2023 Academic Year
Carnegie Mellon University	0	0.00%	33	30.28%	No
Full Sail University	18	100.00%	19	17.43%	No
Concordia University-Wisconsin	Not Offered	Not Offered	16	14.68%	No
University of Advancing Technology	Not Offered	Not Offered	10	9.17%	Yes
Pennsylvania State University-Main Campus	Not Offered	Not Offered	7	6.42%	No
Illinois Institute of Technology	0	0.00%	5	4.59%	No
Massachusetts Institute of Technology	Not Offered	Not Offered	4	3.67%	No
DigiPen Institute of Technology	Not Offered	Not Offered	3	2.75%	No
Drake University	Not Offered	Not Offered	3	2.75%	No
Indiana University-Bloomington	0	0.00%	2	1.83%	No

62.39%

Conferrals by top 20% of institutions

2022-2023 Academic Year, National Data

Source: EAB analysis. National Center for Education Statistics.

Research Process and Sources

EAB conducted an analysis to assess a proposed new programming opportunity.

All workforce demand data was collected from Lightcast, EAB's labor market intelligence partner. Competitive data was collected from the National Center for Education Statistics via the Lightcast platform.

1

Step One: Labor Market Analysis

This report includes an analysis of external labor market needs to determine demand for program graduates. Researchers evaluate historical job postings and future employment projections to determine if the labor market supports program growth.

2

Step Two: Competitive Landscape Analysis

The volume and growth of degree conferrals serves as an indicator of student demand for the program being evaluated. Researchers use conferral data to determine if the selected program is facing a crowded market or if it may struggle to attract students due to declining student interest.

3

(Optional) Step Three: Comparator Program Analysis

Researchers analyze how the design and curricula of similar programs should inform the structure and format of the proposed new program. The researchers collect information publicly available on profiled programs' webpages.

Research Methodology

EAB's market insights research guides strategic programmatic decisions at partner institutions. The Market Insights Service combines qualitative and quantitative data to help administrators identify opportunities for new program development, assess job market trends, and align curriculum with employer and student demand.

Unless stated otherwise, this report includes data from online job postings from January 2024 to December 2024. To best estimate employer demand for bachelor's-level artificial intelligence professionals, we analyzed job postings for bachelor's-level professionals with relevant skills (e.g., artificial intelligence, artificial intelligence development).

Research Questions

The requesting partner asked:

- **How has demand for graduates of my program evolved over time?**
- **What skills should the program teach to prepare students to meet employer demand?**
- **Which employers demonstrate the greatest demand for graduates?**
- **What education level do employers most frequently request from relevant professionals?**
- How are similar programs structured?
- How are similar programs delivered?
- What experiential or practical learning do similar programs offer?

Bolded questions were addressed within this analysis; remaining questions will be addressed if partner pursues additional research.

Research Limitations

Due to a limited student demand data in the state and region, we analyzed completions for bachelor's-level artificial intelligence dance at the national level in the competitive landscape analysis.

As institutions self-report degree completions data, the analyzed CIP code may not fully capture completions for all comparable programs in the profiled regions. Institutions may also report completions for programs unrelated to artificial intelligence under the CIP code analyzed in this report. Further, additional online programs may exist that are not captured in NCES data, as not all institutions offering a distance-delivery program report it as such. Additionally, if an institution offers multiple modalities, completions data will not distinguish between the number of online completions and face-to-face completions.

Definitions

- CIP code refers to the Classification of Instructional Programming code.
- Statewide refers to North Carolina.
- Region and regional refer to the following states: Virginia, Maryland, South Carolina, and the District of Columbia.
- National and nationally refer to the United States.

Data Sources

Lightcast
https://lightcast.io/

This report includes data made available through EAB's partnership with Lightcast (formerly known as Emsi Burning Glass), a labor market analytics firm serving higher education, economic development, and industry leaders in the U.S., Canada, and the United Kingdom.

Lightcast curates and maintains the most comprehensive labor market data sets available for academic program planning, providing real-time job posting data, workforce and alumni outcomes data, and traditional government sources of data. Under this partnership, EAB may use Lightcast proprietary Analyst™ and Alumni Insight™ tools to answer partner questions about employer demand, the competitive landscape, in-demand skills, postings versus actual hires, and skills gaps between job postings and professionals in the workforce. The Lightcast tools also provide EAB with in-depth access to unsuppressed, zip-code-level government data for occupations, industries, programs, and demographics. For more complete descriptions of the Lightcast tools, visit:

- https://lightcast.io/solutions/education/analyst
- https://lightcast.io/solutions/education/alumni-pathways

To learn more about Lightcast and its software and services, please contact Bob Hieronymus, Vice President of Business Development at bob.hieronymus@lightcast.io.

Integrated Postsecondary Education Data System (IPEDS)
https://nces.ed.gov/ipeds/

The Integrated Postsecondary Education Data System (IPEDS) is the Department of Education's National Center for Education Statistics' (NCES) core postsecondary education data collection program. Information is collected annually from all providers of postsecondary education in fundamental areas such as enrollment, program completion and graduation rates, institutional costs, student financial aid, and human resources.

Data collected through IPEDS is publicly released and can be accessed through the IPEDS Data Center by postsecondary education institutions and the general public. The IPEDS Data Center is designed as a centralized, web-based tool for the retrieval and analysis of IPEDS data, the system allows users to access and evaluate institutional data using a wide-range of analytical features that includes the ability to construct customized data sets, download full data files, and create statistical and trend analyses reports.

United States Bureau of Labor Statistics (BLS)
https://nces.ed.gov/ipeds/

EAB Research and Insights Library
https://eab.com/research-and-insights/

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At EAB, our mission is to make education smarter and our communities stronger. We work with thousands of institutions to drive transformative change through data-driven insights and best-in-class capabilities. From kindergarten to college to career, EAB partners with leaders and practitioners to accelerate progress and drive results across five major areas: enrollment, student success, institutional strategy, data analytics, and diversity, equity, and inclusion (DEI). We work with each partner differently, tailoring our portfolio of research, technology, and marketing and enrollment solutions to meet the unique needs of every leadership team, as well as the students and employees they serve. Learn more at eab.com.

Appendix C

UNC Charlotte's **existing AI-related programs and courses** demonstrate strong and sustained student interest:

- **BS in Computer Science with AI, Robotics, and Gaming Concentration:** 359 students currently enrolled, reflecting significant demand for AI-related studies within the Computer Science major.
- **AI-Related Courses:**
  - Seven AI-focused courses recently offered: *Natural Language Processing (Fall)*, *Introduction to Artificial Intelligence (Fall & Spring)*, *Introduction to Machine Learning (Fall & Spring)*, and *Computer Vision (Spring), Intelligent Robotics (Spring), Mobile Robotics (Fall), and Special Topics: AI Literacy (Intermittently)*.
  - **Fall Enrollment:** 323 students across three of the four fall courses.
  - **Spring Enrollment:** 333 students currently enrolled in four of the four spring courses, demonstrating continued demand.

Bachelor of Science in Artificial Intelligence					Cells highlighted in yellow have one or more prerequisites.
Note: This plan of study is to be used as a guide for students to make their own individual plan based on previously completed coursework, graduation plan, and personal preferences. This is not a defined prescription of when to take courses and individual planning should be made in consultation with the major academic advisor and the use of DegreeWorks.					
Semester One	**Credit Hours**	**Semester Two**	**Credit Hours**		
ITSC 1212 - Intro to Computer Science I	4	ITSC 1213 - Intro to Computer Science II	4		**AI Elective Courses (choose any two ; 6 credit hours):**
WRDS - 1103/1104 - Writing and Inquiry	3	MATH / STAT elective course	3		*Machine Learning Cluster*
MATH 1241 - Calculus I	3	Theme Course (General Education)	3		ITCS 4101 - Introduction to Natural Language Processing
Theme Course (General Education)	3	*Science without lab (General Education)*	3		ITCS 4152 - Introduction to Computer Vision
ITAI 1600 - Artificial Intelligence Literacy for Professional Success	3	Elective Outside the Discipline	3		*Robotics and Decision Making Cluster*
					ITCS 4150 - Mobile Robotics
Total Hours	16	**Total Hours**	16		ITCS 4151 - Intelligent Robotics
Semester Three	**Credit Hours**	**Semester Four**	**Credit Hours**		*Human-AI Interaction Cluster*
ITSC 2214 - Data Structures and Algorithms	4	ITCS 3156 - Introduction to Machine Learning	3		ITCS 4121 - Information Visualization
MATH 2112 - Mathematics for Computer Science	3	ITSC 2181 - Intro to Computer Systems	4		ITCS 4123 - Visualization and Visual Communication
Theme Course (General Education)	3	Theme Course (General Education)	3		ITCS 4122 - Visual Analytics

ITAI 2153 - Introduction to Artificial Intelligence and Ethics	3	ITSC 2175 - Logic and Algorithms (preferred) or MATH 2165 - Introduction to Discrete Structures	3		ITCS 3216 - Introduction to Cognitive Science
Elective Outside the Discipline	3	CTCM 2530 - Critical Thinking (General Education)	3		ITIS 4360 - Human-Centered Artificial Intelligence
Total Hours	16	**Total Hours**	16		ITIS 4353 - Social Technology Design
Semester Five	**Credit Hours**	**Semester Six**	**Credit Hours**		*AI System Design Cluster*
ITSC 3155 - Software Engineering	3	Elective Outside the Discipline	3		ITAI 4153: Introduction to Machine Learning Operations
Science with lab (General Education)	3	AI Required Course (choose one) ITCS 4101 - Introduction to Natural Language Processing ; **or** ITCS 4152 - Introduction to Computer Vision	3		ITAI 4154 : AI-Driven Trustworthy Software Development
Science Lab (General Education)	1	AI Elective Course (see list of options on the right)	3		ITCS 4145 - Parallel Computing
ITAI 4160 - Database and Cloud for Artificial Intelligence	3	Unrestricted Elective	3		*AI Security Cluster*
Unrestricted Elective	3	Unrestricted Elective	3		ITIS 4271 - Secure and Trustworthy Artificial Intelligence
Unrestricted Elective					ITIS 4270 : Artificial Intelligence Risk Management
Total Hours	13	**Total Hours**	15		
Semester Seven	**Credit Hours**	**Semester Eight**	**Credit Hours**		
Unrestricted Elective	3	Capstone - ITAI 4155/4153/4154 or ITSC 4850/4851/4681/4682/4750/4990/4991	3		

Unrestricted Elective	3	Elective Outside the Discipline	3		
Elective in Outside Discipline	3	Unrestricted Elective	3		
AI Elective Course (see list of options on the right)	3	Unrestricted Elective	3		
Elective Outside the Discipline	3	Unrestricted Elective	1		
Total Hours	15	**Total Hours**	13		
		Degree Total Hours	120		

New Courses:

- ITAI 4153 - Introduction to Machine Learning Operations
- ITAI 4160 - Database and Cloud for AI
- ITAI 4154 - AI-Driven Development
- ITIS 4271 - Secure and Trustworthy Artificial Intelligence
- ITIS 4270 - Artificial Intelligence Risk Management
- MATH 2112 - Mathematics for Computer Science
- ITAI 1600 - Artificial Intelligence Literacy for Professional Success
- ITAI 2153 - Intro to Artificial Intelligence and Ethics
- ITAI 4155 - Artificial Intelligence Development Projects

	Computing Core						Math & Stats Courses		AI Required Courses					AI Electives	Outside Electives	Capstone
Courses:	ITSC 1212	ITSC 1213	ITSC 2214	ITSC 2175/MATH 2165	ITSC 2181	ITSC 3155	MATH 2112	Various	ITAI 1600	ITAI 2153	ITAI 4160	ITCS 3156	ITCS 4101/4152	Various	Various	ITAI 4155/4153/4154/etc
General Education Competencies																
Communication									X			X				
Perspectives										X						
Quantitative/Data				X			X				X					
Critical Thinking			X						X	X						X
Programmatic SLOs																
Graduates will be able to communicate technical material effectively to both technical and non-technical audiences.									Non-tech audience: I, A Tech audience: I	Non-tech audience: P Tech audience: P						Tech Audience: A in ITAI 4155
Graduates will be able to evaluate the ethical implications of applied AI.									I	P, A						
Upon completing the computing core, students will master the core concepts of computer science, with emphasis on demonstrations of	Programming: I	Programming: A Data Structures: I	Data Structures: I, A													

programming and use of data structures.																
Graduates will be able to explain and evaluate how databases support AI-driven applications.											I, A			(Ex. ITAI 4153) P		P
Graduates will be able to develop and apply machine learning models, extract meaning, automate analysis and decision-making.												I	A			P
I = Introduced, P = Practiced, A = Assessed																

SLO BSAI1: Graduates will be able to communicate technical material effectively to both technical and non-technical audiences.					
Passing Requirements: 80% of the program participants must score "acceptable" or better. Points are determined by rubric (1-3).					
			Rubric Ratings		
Class	Skill/Knowledge	Assessed?	Advanced (3)	Acceptable (2)	Unacceptable (1)
ITAI 1600	Students will be able to articulate the key concepts and principles underlying AI for a non-technical audience.	Yes	Effectively translates complex AI principles into clear, engaging, and accurate explanations tailored to the audience. Uses compelling analogies, real-world examples, and storytelling techniques to enhance understanding and interest.	Conveys fundamental AI concepts in a way that a non-technical audience can understand, using simple language and relevant examples. Demonstrates a basic ability to bridge technical ideas with real-world applications.	Struggles to explain AI concepts clearly, relying on jargon or overly technical language. Alternatively, provides vague or inaccurate descriptions, leaving the audience confused or misinformed.
ITAI 4155	Present AI-related project outcomes clearly and accurately to a technical audience.	Yes	Delivers a precise and insightful presentation of AI-related project outcomes, effectively integrating technical explanations, data visualizations, and well-supported conclusions. Anticipates audience questions and provides thorough, knowledgeable responses that demonstrate deep understanding.	Presents project outcomes in a clear and structured manner, using appropriate terminology and relevant data. Uses appropriate terminology and data to support conclusions, making results understandable to a technical audience.	Project outcomes are unclear, inaccurate, or lack necessary technical detail. Explanations are disorganized, overly vague, or fail to demonstrate a solid understanding of AI concepts. The audience struggles to follow key findings or their significance.

ITAI 4155	Presentation is professional in content and delivery	Yes	Presentation is polished and highly professional, demonstrating strong command of the topic and engaging delivery. Uses effective visuals, compelling storytelling, and dynamic communication skills to maintain audience interest and convey ideas persuasively.	Presentation is well-structured and professional, with clear organization, effective visuals, and confident delivery. Speaker maintains appropriate tone and engages the audience.	Presentation lacks structure, coherence, or professionalism. Slides may be cluttered or ineffective, and delivery may include excessive filler words, poor pacing, or lack of audience engagement.

SLO BSAI2: Graduates will be able to evaluate the ethical implications of applied AI.					
Passing Requirements: 80% of the program participants must score "acceptable" or better. Points are determined by rubric (1-3).					
			Rubric Ratings		
Class	Skill/Knowledge	Assessed?	Advanced (3)	Acceptable (2)	Unacceptable (1)
ITAI 2153	Identify ethical issues related to AI.	Yes	Identifies ethical concerns in AI, recognizing nuanced challenges across different applications. Connects ethical issues to real-world case studies and anticipates emerging concerns in AI development and deployment.	Identifies common ethical issues in AI, such as bias, fairness, privacy, and accountability. Identifies the issues as they appear in real-world scenarios.	Fails to recognize key ethical concerns in AI or identifies issues incorrectly. Demonstrates little awareness of bias, privacy risks, or societal impact. Provides vague or irrelevant examples.
ITAI 2153	Define concepts such as explainability and trustworthiness	Yes	Clearly articulates the meaning and significance of explainability, trustworthiness, and related ethical principles. Relates AI transparency and user trust to real-world examples.	Defines key ethical concepts like explainability and trustworthiness accurately.	Struggles to define key ethical concepts or provides incorrect or overly vague definitions. Lacks understanding of why explainability and trustworthiness matter in AI.

ITAI 2153	Evaluate AI's impact on technology, user experience, or society.	Yes	Provides a deep and well-supported evaluation of AI's impact, incorporating technical, ethical, and societal considerations. Anticipates long-term consequences and recognizes multiple, sometimes differing, perspectives.	Evaluates AI's effects on technology, user experience, or society with relevant examples. Recognizes both benefits and risks but may lack the ability to incorporate different perspectives.	Fails to assess AI's impact beyond surface-level observations. Lacks critical thinking or provides simplistic arguments without evidence.

SLO BSAI3: Upon completing the computing core, students will master the core concepts of computer science, with emphasis on demonstrations of programming and use of data structures.					
Passing Requirements: 80% of the program participants must score "acceptable" or better. Points are determined by rubric (1-3).					
			Rubric Ratings		
Class	Skill/Knowledge	Assessed?	Advanced (3)	Acceptable (2)	Unacceptable (1)
ITSC 1213	Create, test, and debug a computer program	Yes	Develops well-structured, efficient, and maintainable programs. Demonstrates strong problem-solving skills in debugging issues, employing systemic testing strategies and best practices for error handling.	Writes functional programs with correct syntax and logical flow. Demonstrates adequate testing and debugging techniques to identify and fix common errors.	Struggles to write functional code, with frequent syntax or logic errors. Lacks a structured approach to testing and debugging, leading to incomplete or unreliable programs.
ITSC 1213	Employ appropriate coding conventions	Yes	Consistently applies best practices in coding style, including modular design, well-documented functions, and clear logic. Adheres to industry standards and writes code that is well-documented, making	Writes readable and well-structured code, following standard coding conventions such as meaningful variable names, proper indentation, and basic documentation.	Code is inconsistent and difficult to read due to poor formatting, unclear variable names, or lack of comments. Does not follow established coding conventions.

			the purpose and structure clear.		
ITSC 2214	Choose appropriate data structures	Yes	Optimally applies data structures based on problem requirements. Demonstrates an understanding of trade-offs in time complexity, memory usage, and real-world applicability.	Selects and implements suitable data structures for common problems, considering efficiency and functionality.	Fails to select appropriate data structures for a given problem, leading to inefficient or incorrect solutions. Lacks understanding of trade-offs between different structures.

SLO BSAI4: Graduates will be able to explain and evaluate how databases support AI-driven applications.					
Passing Requirements: 80% of the program participants must score "acceptable" or better. Points are determined by rubric (1-3).					
			Rubric Ratings		
Class	Skill/Knowledge	Assessed?	Advanced (3)	Acceptable (2)	Unacceptable (1)
ITAI 4160	Explain key concepts related to relational and NoSQL databases	Yes	Articulates a deep understanding of relational and NoSQL databases, including their trade-offs, scalability considerations, and impact on AI performance. Can compare and contrast database models effectively and discuss their use in AI-driven data storage.	Provides clear and accurate explanations of relational and NoSQL databases, including their structures, strengths, and typical use cases. Can describe how each type supports AI-driven applications with relevant examples.	Fails to accurately define or differentiate between relational and NoSQL databases. Explanations lack clarity, depth, or relevant examples, making it difficult to understand their role in AI applications.

ITAI 4160	Apply data manipulation and retrieval techniques, including filtering, aggregating, and joining data from multiple tables	Yes	Optimizes queries for performance and scalability, demonstrating an in-depth understanding of indexing, query execution plans, and data storage structures. Can adapt data retrieval techniques to different AI-driven use cases, improving efficiency and accuracy.	Writes correct and efficient queries to filter, aggregate, and join data from multiple tables. Uses SQL or NoSQL commands appropriately to retrieve relevant data for AI applications.	Struggles to write queries for filtering, aggregating, or joining data. Queries are inefficient, incorrect, or fail to return meaningful results.

SLO BSAI5: Graduates will be able to develop and apply machine learning models, extract meaning, automate analysis and decision-making.					
Passing Requirements: 80% of the program participants must score "acceptable" or better. Points are determined by rubric (1-3).					
			Rubric Ratings		
Class	Skill/Knowledge	Assessed?	Advanced (3)	Acceptable (2)	Unacceptable (1)
ITCS 4101 ITCS 4152	Preprocess and transform unstructured data for machine learning applications	Yes	Implements advanced preprocessing pipelines, optimizing feature extraction for NLP (e.g., word embeddings, text vectorization) or CV (e.g., edge detection, feature maps). Selects appropriate techniques based on the dataset and model requirements.	Applies basic preprocessing techniques to prepare text (e.g., tokenization, stopword removal) or images (e.g., resizing, normalization) for machine learning models. Understands the impact of preprocessing on model performance.	Fails to clean or structure raw text or image data effectively. Demonstrates little understanding of tokenization, normalization, feature extraction, or data augmentation.
ITCS 4101 ITCS 4152	Train and evaluate machine learning models for extracting meaning from unstructured data	Yes	Fine-tunes models for improved performance, applies advanced evaluation techniques, and interprets results meaningfully. Can	Trains and evaluates machine learning models using standard techniques. Uses appropriate evaluation metrics and identifies areas for	Fails to train a working model or selects inappropriate evaluation metrics. Shows little understanding of overfitting, bias, or hyperparameter

			justify their selection based on task-specific needs.	improvement.	tuning.
ITCS 4101 ITCS 4152	Automate decision-making using AI models in a real-world application	Yes	Successfully applies an AI model to a real-world problem, demonstrating its ability to automate classification, recognition, or decision-making tasks. Understands key deployment considerations, such as inference speed and data requirements	Successfully applies an AI model to a real-world problem, demonstrating its ability to automate classification, recognition, or decision-making tasks.	Fails to integrate an AI model into a functional application or lacks awareness of practical deployment considerations.

Percentages **within the table** represent the amount of content shared.Percentage

(Old) Curriculum, B.S. in Computer Science with Concentration in AI, Robotics, and Gaming

New Curriculum, B.S. in Artificial Intelligence

						100%	50%																												
						Gen Ed Courses	Gen Ed for Major		Core Courses									Math & Stats Courses		Electives in Other Disciplines	ration RequiredChoo		oncentration ElectivesChoose 4			Tech ElectiveChoose 2 CCI courses3000+							CapstoneChoose one		
						Various	MATH 1241	MATH 1242	ITSC 1212	ITSC 1213	ITSC 1600 OR ITSC 2600	ITSC 2175 OR MATH 2165	ITSC 2181	ITSC 2214	ITSC 3146	ITSC 3155	ITSC 3688	MATH 216	STAT 2122	Various	ITCS 3153	ITCS 3156	ITCS 4101 (Optional)	ITCS 4152 (Optional)	Various	ITCS 3160 (optional)	ITCS 3190 (optional)	ITCS 3162 (Optional)	ITIS 3200 (Optional)	ITCS 4010 - AI Driven Development (Optional)	ITIS 4221 (Optional)	Various*	ITSC 4155 (Optional)	ITCS 4232, 4238, ITIS 4390, 4246	ITSC 4681, 4682, 4750, 4850, 4851, 4990, 4991
% of Curriculum New*	Curriculum Section	% of Section New*	Course Names	Credits	% of Course New	25-26	3	3	4	4	2	3	4	4	3	3	3	3	3	15	3		12			6							3		
	Gen Ed		Various	25-26																															
0%	Gen Ed for Major	0%	MATH 1241	3	0%		100%																												
0%	Computing Core	0%	ITSC 1212	4	0%				100%																										
			ITSC 1213	4	0%					100%																									
			ITSC 2214	4	0%									100%																					
			ITSC 2175/MATH 2165	3	0%							100%																							
			ITSC 2181	4	0%								100%																						
			ITSC 3155	3	0%											100%																			
0.9% - 4.7%	Math & Stats Courses	10-55%	MATH 2112	3	10%													40%	50%																
			Various	3																															
6.9%	AI Required Courses	32%	ITAI 1600	3	75%						25%																								
			ITAI 2153	3	55%																20%	25%													
			ITAI 4160	3	62%																					15%	15%	8%							
			ITCS 3156	3	0%																	100%													
			ITCS 4101 OR	3	0%																		100%												
			ITCS 4152		0%																			100%											
0%	Electives in Other Disciplines	0%	Various	15	0%															100%															
0% - 6.7%	AI Electives Choose two	0-78%	ITCS 4101, 4152, 4150, 4151, 4123	6	0%																			100%											
			ITCS 4121, 4122, 3216, 4145, ITIS 4360, 4353		0%																											100%			
			ITAI 4153		55%											10%											20%	10%	5%						
			ITAI 4154		40%																									40%			20%		
			ITIS 4270		70%																								20%		10%				
			ITIS 4271		85%																										15%				
			ITAI 4155		60%																											20%	20%		
0% - 2.6%	Capstone Choose one	0-60%	ITAI 4153 See Above	3																															
			ITAI 4154 See Above																																
			ITSC 4681, 4682, 4750, 4850, 4851, 4990, 4991																																100%
Total:	8% - 21%																																		

* Ranges represent different curriculum paths. Student can choose a curriculum path that more closely follow the BS in CS with AIRG concentration while others might choose a more divergent path.

Course Name	Description	Pre / Co-requisites	Content Shared %
MATH 2112 - Mathematics for Computer Science	An overview of linear algebra and probability topics for computer science. Systems of linear equations, vector and matrix operations, eigenvalues and eigenvectors, orthogonality, introduction to probability of events, discrete and continuous random variables and their distributions, and hypothesis testing. This course emphasizes the understanding of concepts through computational implementation of algorithms. May not be taken for credit if credit has been received for both MATH 2164 and STAT 2122 or higher.	Prerequisites: MATH 1241 with grade of C. Restriction: Majors in the College of Computing and Informatics.	MATH 2164 -40 % STAT 2122 -50%
ITAI 1600 - Artificial Intelligence Literacy for Professional Success	AI literacy is a set of competencies that enables individuals to critically evaluate AI technologies; communicate and collaborate effectively with AI; and use AI as a tool for school, at home, and in the workplace. The following questions frame the learning objectives of this course: What is AI?; How can I effectively interact with Generative AI?; What is the responsible use of AI? What are the broader social implications of AI? Guest speakers, including industry partners, discuss and explain aspects of a professional career in the field of AI and provide an overview of AI based on historical and current developments. Students will engage with case studies of the use of AI to support learning, ethical and responsible issues in the use of AI, and develop critical reviews of responses from generative AI such as the GPT models. Assignments include critical reviews of reading materials and the use of a generative AI tool. In this course, students will also learn about setting goals, defining their future career options, becoming a part of UNC Charlotte, planning coursework, building your network, managing time, and working in a team.	NA	ITSC 1600/2600 - 25%
ITAI 2153 - Introduction to Artificial Intelligence and Ethics	This course offers a practical introduction to artificial intelligence, emphasizing both the development of AI applications and the ethical considerations inherent in their deployment. Students will engage in hands-on projects using a high-level programming language and accessible open-source AI tools and APIs. They will explore key machine learning concepts, including supervised, reinforcement learning and generative AI, while also critically analyzing ethical challenges, including explainability and trustworthiness of AI systems.	Prerequisite(s): ITSC 1213 - Introduction to Computer Science II. Pre- or Corequisite(s): ITAI 1600 - AI Literacy for Professional Success	ITSC 3153 - Introduction to Artificial Intelligence 20% ITCS 3156 - Introduction to Machine Learning 25%
ITAI 4160 - Databases and Cloud for Artificial Intelligence	This course explores the intersection of data management, cloud computing, and artificial intelligence, focusing on structured and unstructured data storage, processing, and analytics in scalable cloud environments for AI applications. Topics include relational and NoSQL databases, data modeling, statistical analysis, data wrangling, and big data processing. Students will gain hands-on experience with a cloud platform to build data pipelines and automate AI workflows and develop practical skills in managing and analyzing large-scale data to support AI and machine learning applications.	ITSC 1213 (C or better) , ITSC 2181 Intro to Computer Systems (C or Better)	ITCS 3160 Database Design and Implementation- 15% ITCS 3190 Introduction to Cloud Computing- 15% ITCS 3162 Introduction to Data Mining- 8%
ITAI 4153 - Introduction to Machine Learning Operations	This course provides a comprehensive introduction to the key components of the machine learning (ML) project lifecycle, integrating essential practices from machine learning, DevOps, and data engineering. Through hands-on learning, students will gain practical experience in deploying and maintaining ML models in production environments reliably and efficiently.	Prerequisite(s): ITSC 2214 - Data Structures and Algorithms with grade of C or above Pre- or Co-req(s) ITCS 3156 - Introduction to Machine Learning	ITSC 3155 Software Engineering- 10% ITCS 3162 Introduction to Data Mining- 10% ITCS 3190 Introduction to Cloud Computing- 20% ITIS 3200 Introduction to Information Security and Privacy- 5%
ITAI 4154 - AI-Driven Trustworthy Software Development	This project-oriented course explores the integration of Artificial Intelligence (AI) with software development, covering multiple phases of the Software Development Lifecycle (SDLC), including planning, designing, coding, debugging, refactoring, testing, deployment, and management. A key focus is on how Large Language Models (LLMs) and Generative AI are reshaping development practices, especially considering trust and trustworthiness properties (encompassing security, reliability, privacy, and maintainability). Through an hands-on project, students will critically examine both the potential and risks of LLMs, such as biases and inaccuracies, in enhancing software trustworthiness. By working on a real-world (or realistic) application, students will apply AI-driven development tools, assess trustworthiness, and implement strategies to mitigate risks. This course emphasizes practical experience, enabling students to responsibly leverage LLM-based tools to build trustworthy software systems that meet industry standards.	Prerequisite(s): ITSC 3155 and (ITAI 2153 OR ITCS 3156)	ITSC 4155- 20% ITCS 4010 - AI Driven Development 40%

ITIS 4271 - Secure and Trustworthy Artificial Intelligence	This course explores the security, privacy, and ethical challenges in AI and machine learning systems. Designed for advanced students, it covers AI risk assessment, adversarial machine learning, and trustworthy AI deployment. Through lectures, case studies, and hands-on projects, students will learn to identify vulnerabilities, implement defenses, and design trustworthy AI systems. By the end, they will be equipped to develop and deploy AI responsibly in real-world scenarios.	Prerequisite(s): ITCS 3156 Introduction to Machine Learning	ITIS 4221 15%
ITIS 4270 - Artificial Intelligence Risk Management	Understand risks of AI in enterprise applications and risk mitigation methods. Topics covered include: AI risk frameworks, AI governance, threat modeling and detection, risks in data pipelines, risks in integration and adoption, and risks in maintenance of AI based applications.	Prerequisite(2): ITAI 2153 - Introduction to Artificial Intelligence and Ethics	ITIS 3200 20% ITIS 4221/5221 10%
ITAI 4155 - Artificial Intelligence Development Projects	Students will apply artificial intelligence (AI) techniques to real-world problems through a capstone project experience. Students will explore the complete project development lifecycle, from problem identification and requirement analysis to solution design, implementation, testing, deployment, and evaluation. Emphasis will be placed on leveraging AI methodologies such as machine learning, deep learning, natural language processing, computer vision, and generative AI techniques. Students will work in teams to develop AI-driven software prototypes.	ITAI 2153 - Intro to Artificial Intelligence and Ethics AND ITSC 3155 Software Engineering AND ITCS 3156 Introduction to Machine Learning Senior Standing	ITSC 4155 - 20% Topics in Computer Science: Design and Development of Gen AI Applications (Spring 2025) - 20%
ITAI 4153 - Introduction to Machine Learning Operations	This course provides a comprehensive introduction to the key components of the machine learning (ML) project lifecycle, integrating essential practices from machine learning, DevOps, and data engineering. Through hands-on learning, students will gain practical experience in deploying and maintaining ML models in production environments reliably and efficiently.	Prerequisite(s): ITSC 2214 - Data Structures and Algorithms with grade of C or above Pre- or Co-req(s) ITCS 3156 - Introduction to Machine Learning	ITSC 3155 Software Engineering- 10% ITCS 3162 Introduction to Data Mining- 10% ITCS 3190 Introduction to Cloud Computing- 20% ITIS 3200 Introduction to Information Security and Privacy- 5%
ITAI 4154 - AI-Driven Trustworthy Software Developm	This project-oriented course explores the integration of Artificial Intelligence (AI) with software development, covering multiple phases of the Software Development Lifecycle (SDLC), including planning, designing, coding, debugging, refactoring, testing, deployment, and management. A key focus is on how Large Language Models (LLMs) and Generative AI are reshaping development practices, especially considering trust and trustworthiness properties (encompassing security, reliability, privacy, and maintainability). Through an hands-on project, students will critically examine both the potential and risks of LLMs, such as biases and inaccuracies, in enhancing software trustworthiness. By working on a real-world (or realistic) application, students will apply AI-driven development tools, assess trustworthiness, and implement strategies to mitigate risks. This course emphasizes practical experience, enabling students to responsibly leverage LLM-based tools to build trustworthy software systems that meet industry standards.	Prerequisite(s): ITSC 3155 and (ITAI 2153 OR ITCS 3156)	ITSC 4155- 20% ITCS 4010 - AI Driven Development 40%

Last Name	First Name	Rank	Department	Faculty type	Academic degrees
Ahmed	Dewan	Teaching Associate Professor	Computer Science	Not on Tenure Track	PHD (Computer Science), Univ of Ottawa
Akella	Srinivas	Professor	Computer Science	Permanent Tenure	PHD (Robotics), Carnegie Mellon Univ
Allen	Tyler	Assistant Professor	Computer Science	Tenure Track	PHD (Computer Science), Clemson Univ
Bahamon	Julio	Teaching Associate Professor	Computer Science	Not on Tenure Track	PHD (Computer Science), North Carolina State Univ
Bunescu	Constantin	Associate Professor	Computer Science	Permanent Tenure	PHD (Computer Science), Univ of Texas-Austin
Cheng	Qiong	Teaching Assistant Professor	Computer Science	Not on Tenure Track	PHD (Computer Science), Georgia State Univ
Chu	Bei-Tseng	Professor	Software & Info Systems	Permanent Tenure	PHD (Computer Science), Univ of Maryland-College Park
Das	Srijan	Assistant Professor	Computer Science	Tenure Track	PHD (Computer Science), Univ Cote dAzur
Dobbs	Bryan	Teaching Assistant Professor	Software & Info Systems	Not on Tenure Track	PHD (Computing & Info Systems), UNC Charlotte
Du	Xiuxia	Professor	Bioinformatics and Genomics	Permanent Tenure	DSC (Mathematics and Computer Sci), Washington Univ-St. Louis
Fan	Liyue	Assistant Professor	Computer Science	Tenure Track	PHD (Computer Science), Emory Univ
Ge	Yaorong	Professor	Software & Info Systems	Permanent Tenure	PHD (Computer Science), Vanderbilt Univ
Hajja	Ayman	Teaching Associate Professor	Computer Science	Not on Tenure Track	PHD (Computing & Info Systems), UNC Charlotte
Johnson	Elizabeth	Senior Lecturer	Computer Science	Not on Tenure Track	EDD (Educational Administration), George Washington Univ
Jugan	Daniel	Senior Lecturer	Computer Science	Not on Tenure Track	MS (Computer Science), UNC Charlotte
Karp	Jason	Senior Lecturer	Computer Science	Not on Tenure Track	EDD (Organizational Leadership), Nova Southeastern Univ
Krishnan	Siddharth	Assistant Professor	Computer Science	Tenure Track	PHD (Computer Science), Virginia Tech Univ
Kuemmerle	Christian	Assistant Professor	Computer Science	Tenure Track	PHD (Mathematics), Technical Univ of Munich
Lee	Minwoo	Assistant Professor	Computer Science	Tenure Track	PHD (Computer Science), Colorado State Univ
Lipford	Heather	Professor	Software & Info Systems	Permanent Tenure	PHD (Computer Science), Georgia Institute of Technology
Lu	Aidong	Professor	Computer Science	Permanent Tenure	PHD (Computer Engineering), Purdue Univ-Main
Najjar	Nadia	Teaching Associate Professor	Software & Info Systems	Not on Tenure Track	PHD (Computing & Info Systems), UNC Charlotte
Niu	Xi	Associate Professor	Software & Info Systems	Permanent Tenure	PHD (Information Sciences & Sys), UNC Chapel Hill
Park	Albert	Assistant Professor	Software & Info Systems	Tenure Track	PHD (Health Informatics), Univ of Washington
Perez Quinones	Manuel	Professor	Software & Info Systems	Permanent Tenure	DSC (Computer Science), George Washington Univ
Powell	Laurel	Teaching Assistant Professor	Computer Science	Not on Tenure Track	PHD (Computer Science), UNC Charlotte
Ras	Zbigniew	Professor	Computer Science	Permanent Tenure	PHD (Mathematics and Computer Sci), Warsaw Univ
Saule	Erik	Associate Professor	Computer Science	Permanent Tenure	PHD (Computer Science), Grenoble Inst of Technology
Schuckers	Stephanie	Distinguished/Titled Professor	Computer Science	Permanent Tenure	PHD (Electrical and Electronics Egr), Univ of Michigan-Ann Arbor
Slane	Lauren	No Rank	Coll of Computing&Informatics	Not on Tenure Track	EDD (Educational Leadership), UNC Charlotte
Sridhar	Meera	Associate Professor	Software & Info Systems	Permanent Tenure	PHD (Computer Science), Univ of Texas-Dallas
Terejanu	Gabriel	Professor	Computer Science	Permanent Tenure	PHD (Computer Science), SUNY Univ at Buffalo
Thayer	Matthew	Lecturer	Computer Science	Not on Tenure Track	MS (Computer Science), UNC Charlotte
Vieira	Marco	Professor	Computer Science	Permanent Tenure	PHD (Computer Engineering), Univ of Coimbra
Wang	Jinzhen	Assistant Professor	Computer Science	Tenure Track	PHD (Electrical and Electronics Egr), New Jersey Institute of Technology
Wang	Pu	Associate Professor	Computer Science	Permanent Tenure	PHD (Electrical and Electronics Egr), Georgia Institute of Technology
Wang	Weichao	Professor	Software & Info Systems	Permanent Tenure	PHD (Computer Science), Purdue Univ-Main
Wei	Jinpeng	Associate Professor	Software & Info Systems	Permanent Tenure	PHD (Computer Science), Georgia Institute of Technology
Whaley	Adam	Teaching Assistant Professor	Bioinformatics and Genomics	Not on Tenure Track	PHD (Bioinformatics), UNC Charlotte
Wilson	Dale-Marie	Teaching Professor	Software & Info Systems	Not on Tenure Track	PHD (Computer Science), Auburn Univ
Xu	Depeng	Assistant Professor	Software & Info Systems	Tenure Track	PHD (Computer Science), Univ of Arkansas-Fayetteville
Xue	Hongfei	Assistant Professor	Computer Science	Tenure Track	PHD (Computer Science), SUNY Univ at Buffalo
Yan	Yonghong	Associate Professor	Computer Science	Permanent Tenure	PHD (Computer Science), Univ of Houston
Yang	Jing	Professor	Computer Science	Permanent Tenure	PHD (Computer Science), Worcester Polytechnic Institute
Yang	Li	Assistant Professor	Computer Science	Tenure Track	PHD (Computer Engineering), Arizona State Univ-Tempe
Zadrozny	Wlodek	Professor	Computer Science	Permanent Tenure	PHD (Mathematics), Polish Academy of Sciences
Zhang	Xiang	Assistant Professor	Computer Science	Tenure Track	PHD (Computer Engineering), Univ of New South Wales