Degree Proposal
Bachelor of Science in Applied Artificial Intelligence (AI)
College of Professional Studies

Executive Summary

Evolving economic and workforce demands have created an urgent need for professionals who can understand and use artificial intelligence (AI) while prioritizing human and societal considerations. An increasing number of colleges and universities offer undergraduate programs in AI, either as standalone majors or concentrations within related disciplines. Few programs, however, integrate humanities or domain-specific knowledge alongside technical AI coursework, leaving a gap in preparing graduates capable of combining technical proficiency with human-centered thinking. The proposed B.S. in Applied AI addresses this gap by blending technical AI training with liberal arts, ethics, and domain-specific applications and providing students a workforce-aligned pathway into high-demand AI careers.

The program, proposed by the College of Professional Studies, aims to prepare ethical, human-centered AI professionals who will lead AI development and deployment. It builds students' technical competencies alongside the critical thinking, communication, and ethical reasoning needed to use AI responsibly in academic and professional contexts. Students complete a minimum of 120 credits, including 42 credits of foundational courses, 27 credits of required courses, 15 credits in one of four career-aligned concentrations, 33 credits of open electives, and a three-credit experiential capstone.

Rationale and Program Competition

The B.S. in Applied AI responds to sustained and significant growth in the AI market, which is projected to expand from $279 billion in 2024 to over $1.8 trillion by 2030 (Grand View Research, 2025). The program is designed for working adults and community college transfer students and builds on their prior academic and professional experience to provide an accessible pathway into AI careers. This approach positions the degree to serve a significant population of learners, including the 37.6 million working-age adults with some college credit but no degree. Additionally, the program offers four market-validated concentrations aligned with distinct AI career pathways: Human-AI Interaction and Design, AI Implementation Management, Workforce Transformation, and AI Entrepreneurship, Strategy, and Innovation. The B.S. in Applied AI is also designed to align with CPS's Plus-One master's degree in Applied AI, offering an accelerated pathway from undergraduate study to deeper specialization and career advancement.

The B.S. in Applied AI is strategically positioned between highly selective research-intensive programs and more flexible but less technically rigorous online degrees. This positioning responds to rapidly expanding AI market growth and increasing employer demand for professionals who can successfully implement AI tools to enhance productivity. While some institutions, such as Purdue University and Texas Tech University, integrate liberal arts perspectives into AI curricula, they generally feature either traditional campus delivery, technical depth, or fully online formats, and do not offer all three elements of flexibility, experiential learning, and structured career pathways within a single program.

Program Enrollment Projections

Initial enrollment is projected at approximately 10 students, with steady, modest growth expected to bring annual enrollment to around 30 students by year five.

Impact on Faculty and Administrative Support

The program is expected to drive greater enrollment for STEM-designated faculty and other faculty within CPS. No new full-time faculty hires are needed, as each course in the proposed curriculum is established. Staffing needs for advising and operations will be reassessed as enrollment grows, but no additional hires are anticipated in the near term.

Program Contribution to the University's Mission

The B.S. in AI supports the University's broader strategy to embed AI across disciplines and offer experiential learning opportunities while emphasizing responsible and human-centered applications of AI. The program's hybrid delivery model combines online coursework with hands-on, in-person experiences across Northeastern's global network, enabling students to apply their learning within their professional contexts. Throughout the curriculum, students develop skills in ethical decision-making, critical analysis, and professional communication, preparing them to implement AI thoughtfully and effectively across diverse disciplines and settings.