Artificial Intelligence Minor (for non-DS and non-CS Majors)

The Minor in AI is an academic program designed to provide students with foundational knowledge and practical skills in Artificial Intelligence. The program includes courses in machine learning, neural networks, data science, AI ethics, and applications of AI in other fields. It's goals are: 1) Equip students with fundamental AI concepts and techniques; 2) Develop problem-solving skills using AI methodologies; 3) Provide hands-on experience with AI tools and frameworks; 4) Explore ethical and societal implications of AI; and 5) Complement students' major disciplines with AI-driven insights.

Requirements:

This AI Minor for non-DS and non-CS Majors consists of three core courses and two technical electives.

Core Courses: Three Courses CS 115 Introduction to Computer Science I in C++ 3 or CS 113 Introduction to Computer Science I MATH 333 Probability and Statistics 3 or MATH 341 Statistical Methods II CS 375 Introduction to Machine Learning 3 Elective Courses: Select at least two among the following elective courses: Introduction to Machine Learning 3 DS 340 Fundamentals and Principles of Data Science 3 DS 400 Scientific Foundation of Machine Learning 3 DS 410 Federated Machine Learning and Applications 3 DS 440 Big Data Systems 3 DS 450 Data Visualization 3 DS 480 Fundamentals and Applications of Graph Neural Networks 3 DS 480 Fundamentals and Applications of Graph Neural Networks 3 S 482 Data Mining 3 Linformatics-Applied AI (at most one course) 3 IS 392 Al-Driven Text Analytics 3 S 480 Data Analytics for Business Information Systems 3	Code	Title	Credits	
or CS 113 Introduction to Computer Science I MATH 333 Probability and Statistics 3 or MATH 341 Statistical Methods II CS 375 Introduction to Machine Learning 3 Elective Courses: Select at least two among the following elective courses: Introduction of Machine Learning 3 DS 340 Fundamentals and Principles of Data Science 3 DS 400 Scientific Foundation of Machine Learning 3 DS 410 Federated Machine Learning and Applications 3 CS 444 Big Data Systems 3 DS 450 Data Visualization 3 DS 480 Fundamentals and Applications of Graph Neural Networks 3 CS 482 Data Mining 3 2. Informatics-Applied AI (at most one course) 1 IS 392 AI-Driven Text Analytics 3 S 465 Data Analytics for Business Information Systems 3 3. Robotics (at most one course) 3 ECE 432 Advanced Control Systems and Robotics 3 CS 440 Computer Vision 3 E455	Core Courses: Three Courses			
MATH 333 Probability and Statistics 3 or MATH 341 Statistical Methods II CS 375 Introduction to Machine Learning 3 Elective Courses: Select at least two among the following elective courses: 1. Data Science (at least one course) DS 340 Fundamentals and Principles of Data Science S 400 Scientific Foundation of Machine Learning 3 DS 410 Federated Machine Learning and Applications 3 CS 444 Big Data Systems 3 DS 450 Data Visualization 3 DS 480 Fundamentals and Applications of Graph Neural Networks 3 CS 482 Data Mining 3 IS 392 Al-Driven Text Analytics 3 IS 392 Al-Driven Text Analytics for Business Information Systems 3 IS 485 Data Analytics for Business Information Systems 3 Sc 440 Computer Vision 3 ECE 432 Advanced Control Systems and Robotics 3 Co	CS 115	Introduction to Computer Science I in C++	3	
or MATH 341 Statistical Methods II CS 375 Introduction to Machine Learning 3 Elective Courses: Select at least two among the following elective courses: 1 1. Data Science (at least one course) 1 DS 340 Fundamentals and Principles of Data Science 3 DS 400 Scientific Foundation of Machine Learning 3 DS 410 Federated Machine Learning and Applications 3 CS 444 Big Data Systems 3 DS 450 Data Visualization 3 DS 480 Fundamentals and Applications of Graph Neural Networks 3 CS 482 Data Mining 3 2. Informatics-Applied AI (at most one course) 3 IS 392 Al-Driven Text Analytics 3 IS 465 Data Analytics for Business Information Systems 3 3. Robotics (at most one course) 3 ECE 432 Advanced Control Systems and Robotics 3 CS 440 Computer Vision 3 IE 455 Robotics and Programmable Logic Controllers 4. Fintech (at most one course) FIN 310 D	or CS 113	Introduction to Computer Science I		
CS 375 Introduction to Machine Learning 3 Elective Courses: Select at least two among the following elective courses: 1. Data Science (at least one course) DS 340 Fundamentals and Principles of Data Science 3 DS 400 Scientific Foundation of Machine Learning 3 DS 410 Federated Machine Learning and Applications 3 CS 444 Big Data Systems 3 DS 450 Data Visualization 3 DS 480 Fundamentals and Applications of Graph Neural Networks 3 CS 482 Data Mining 3 2. Informatics-Applied AI (at most one course) 3 IS 392 AI-Driven Text Analytics 3 3. Robotics (at most one course) 3 ECE 432 Advanced Control Systems and Robotics 3 CS 440 Computer Vision 3 IE 455 Robotics and Programmable Logic Controllers 3 4. Fintech (at most one course) 3 FIN 310 Data-Driven Financial Modeling 3 FIN 320 Fin Data Analytics 3	MATH 333	Probability and Statistics	3	
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DS 480 Fundamentals and Applications of Graph Neural Networks 3 CS 482 Data Mining 3 2. Informatics-Applied AI (at most one course) IS 392 AI-Driven Text Analytics 3 IS 465 Data Analytics for Business Information Systems 3 3. Robotics (at most one course) ECE 432 Advanced Control Systems and Robotics 3 CS 440 Computer Vision 3 IE 455 Robotics and Programmable Logic Controllers 3 4. Fintech (at most one course) FIN 310 Data-Driven Financial Modeling 3 FIN 320 Fin Data Analytics 3	CS 444	Big Data Systems	3	
CS 482 Data Mining 3 2. Informatics-Applied AI (at most one course) IS 392 AI-Driven Text Analytics 3 IS 465 Data Analytics for Business Information Systems 3 3. Robotics (at most one course) ECE 432 Advanced Control Systems and Robotics 3 CS 440 Computer Vision 3 IE 455 Robotics and Programmable Logic Controllers 3 4. Fintech (at most one course) FIN 310 Data-Driven Financial Modeling 3 FIN 320 Fin Data Analytics 3	DS 450	Data Visualization	3	
2. Informatics-Applied AI (at most one course) IS 392 AI-Driven Text Analytics 3 IS 465 Data Analytics for Business Information Systems 3 3. Robotics (at most one course) ECE 432 Advanced Control Systems and Robotics 3 CS 440 Computer Vision 3 IE 455 Robotics and Programmable Logic Controllers 3 4. Fintech (at most one course) FIN 310 Data-Driven Financial Modeling 3 FIN 320 Fin Data Analytics 3	DS 480	Fundamentals and Applications of Graph Neural Networks	3	
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4. Fintech (at most one course) FIN 310 Data-Driven Financial Modeling 3 FIN 320 Fin Data Analytics 3	CS 440	Computer Vision	3	
FIN 310 Data-Driven Financial Modeling 3 FIN 320 Fin Data Analytics 3	IE 455	Robotics and Programmable Logic Controllers	3	
FIN 320 Fin Data Analytics 3	4. Fintech (at most one course)			
	FIN 310	Data-Driven Financial Modeling	3	
MGMT 416 Artificial Intelligence for Business Decisions 3	FIN 320	Fin Data Analytics	3	
	MGMT 416	Artificial Intelligence for Business Decisions	3	

Students in DS and CS Majors should NOT take this minor, they should take AI Minor for DS and CS Majors instead.