

# Artificial Intelligence Minor (for DS and 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. Its goals are:

- Equip students with fundamental AI concepts and techniques.
- Develop problem-solving skills using AI methodologies.
- Provide hands-on experience with AI tools and frameworks.
- Explore ethical and societal implications of AI.
- Complement students' major disciplines with AI-driven insights.

Students must take 5 courses (15 credits) that are not core courses within their existing majors.

## Requirements:

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

Code	Title	Credits
Core Courses: Two courses		
CS 375	Introduction to Machine Learning	3
Select one of the following courses:		
DS 400	Scientific Foundation of Machine Learning	
DS 410	Federated Machine Learning and Applications	
DS 480	Fundamentals and Applications of Graph Neural Networks	

Code	Title	Credits
Elective Courses: Select three among the following elective courses:		
1. Data Science (at least two courses, excluding those already applied as a core course for this minor)		
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)		
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
MGMT 416	Artificial Intelligence for Business Decisions	3

Students outside of DS and CS Majors should NOT take this minor, they should take “AI Minor for non-DS and non-CS Majors” instead.