Artificial Intelligence

Course # COMP 3071

Credits 6

Prerequisites and/or Corequisites: Data Structures and Algorithms

Course Description

This course covers advanced theories and state-of-the-art techniques of artificial intelligence. Artificial intelligence (AI) is a research field that studies how to realize the intelligent human behaviors on computers. The AI is to make a computer that can learn, plan, and solve problems autonomously. The topic includes building blocks and components of artificial intelligence, learning about concepts like algorithms, machine learning, and neural networks.

The laboratory focuses on training the students with building models using various artificial intelligence algorithms.

Course Learning Outcomes

Upon the completion of the course, students will be able to:

- Discuss the core concepts and algorithms of advanced AI, machine learning, deep learning, natural language processing, robotics, and so on.
- Apply the basic principles, models, and algorithms of AI to recognize, model, and solve problems in the analysis and design of information systems.
- Critically analyze the structures and algorithms of a selection of techniques related to searching, reasoning, machine learning, and deep learning.
- Evaluate how uncertainty is being tackled in the knowledge representation and reasoning process based on statistical reasoning.
- Communicate clearly and effectively using the technical language of the field correctly in a group.

Course Assessments and Grading

Item	**Weight**
HWAC/ CASE STUDY	10%
MIDTERM EXAM	20%
Quizzes/In-class exercises	10%
Group Project	20%

Item	Weight
FINAL EXAM	40%