AIDA 1430: Artificial Intelligence

A. COURSE DESCRIPTION

Credits: 3
Lecture Hours/Week: 3
Lab Hours/Week: 0
OJT Hours/Week: *.*

Prerequisites:
This course requires the following prerequisite
AIDA 1420 - Machine Learning (Number of Years Valid: 5)

Corequisites: None
MnTC Goals: None

This course introduces artificial intelligence (AI) as a system comprised of perception, machine learning algorithms, and action. Topics include the goals of AI, machine learning algorithms, graph searching, neural networks, and the history of AI. Students must have a computer running C, Python, NumPy, matplotlib, scikit-learn, and TensorFlow. Students must be able to install new software and libraries on their computer.

B. COURSE EFFECTIVE DATES: 04/30/2024 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Identify goals of AI.
2. Model problems as graphs.
3. Represent problems in a format that computer programs can solve.
4. Examine graph-search algorithms.
5. Compare machine learning algorithms.
7. Write code that makes use of current machine learning tools/libraries.
8. Interpret outputs from machine learning algorithms.
9. Study the history and limitations of AI.

D. LEARNING OUTCOMES (General)

1. Investigate and define goals of AI.
2. Implement machine learning algorithms.
3. Write code to run a basic neural network using predefined Python libraries.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted