AIDA 1420: Machine Learning

A. COURSE DESCRIPTION

Credits: 2
Lecture Hours/Week: 2
Lab Hours/Week: 0
OJT Hours/Week: *.*

Prerequisites:
This course requires the following prerequisite
AIDA 1410 - Algorithms and Data Structures (Number of Years Valid: 5)

Corequisites: None

MnTC Goals: None

This course is an introduction to machine learning. Topics include classification (decision trees and support vector machines), regression, clustering (k-means and hierarchical), and an overview of neural networks. Students must have a PC or Mac computer running C, Python, NumPy, matplotlib, scikit-learn, and be able to install additional libraries as needed.

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

C. OUTLINE OF MAJOR CONTENT AREAS

1. Write code to import and visualize data.
2. Import, organize, manipulate, and store data.
3. Run and edit code that uses support vector machine (SVM) algorithms.
4. Implement and analyze clustering algorithms.
5. Run and edit code that uses neural networks.

D. LEARNING OUTCOMES (General)

1. Run machine learning algorithms.
2. Write code to import data and solve problems.

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

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted