Machine Learning
Spring 2020
MWF 9-9:50am, EN3110

Instructor: Chao Lan (clan@uwyo.edu), EN4087
TAs: Yijun Liu (yliu20@uwyo.edu), Hui Hu (hhu1@uwyo.edu), EERB 411B
Office Hours: W 2-4:30pm, Th 1-3pm.

Course Description
Machine learning studies "how can we build computer programs that automatically improve their performance through experience?" This course introduces fundamentals of machine learning; it covers methods, theory and algorithms needed to do research in (and applications of) machine learning. Subjects are taken from machine learning, classic statistics, data mining and information theory. Topics include, but not limited to, regression, density estimation, classification, kernel methods, ensemble methods, dimensionality reduction, clustering, online learning and learning theory.

Prerequisite
COSC3020 or approval of the instructor. Working knowledge on linear algebra, probability and optimization are needed to fully understand the lectures and complete theory assignments. Sufficient programming skills (in Python) are required to complete programming assignments.

Grading Policy
- 4550: Assignment 50%, Midterm1 15%, Midterm2 15%, Final 20%
- 5550: Assignment 70%, Midterm1 10%, Midterm2 10%, Final 10%

Reference

Assignment Policy
- Students can collaborate in completing assignments. However, participants should clarify any major components that are worked out with others, and be ready to independently defend their solutions.
- Students can take reference from online materials in completing assignments. However, practitioners should clarify any major components that are worked out based on those reference, and be ready to defend their solutions.
- Late submissions will not be graded unless they are approved by the instructor before their deadlines.

Attendance and Auditing
Attendance is not mandatory. Everyone is welcome to audit the lectures. However, auditors cannot take exams or quizzes and their submitted works will not be graded or commented.