NAME AND TITLE: William Ju, Associate Professor, Teaching Stream

DEPARTMENT: Human Biology Program


NUMBER OF 299Y SPOTS: 1

OBJECTIVES AND METHODOLOGY:
The goal of the research project will be to identify how machine learning programs can best be utilized in the classroom within undergraduate life science courses. Students in 3rd year courses will have access to a Machine Learning (ML) program (Notetonic) that will allow them to take notes and compare them with those of their classmates. The major objectives of this study will be to 1) develop surveys to understand how students used ML programs, 2) how to best implement ML programs and 3) to identify best practices for their inclusion in courses.

DESCRIPTION OF STUDENT PARTICIPATION:
Students will be responsible for designing surveys (and will also be approved by the Research Ethics Board), and implemented as an online survey for students at the end of the course to evaluate the perceived usefulness/ease of use of ML in note-taking, and analyzing the survey data related to the objectives outlined above. Additionally, students will perform an “environmental scan” of the published literature to view how ML is currently used in higher education.

*Students will be required to have strong knowledge of statistics, R-programming and the ability to synthesize published primary research articles. The project will require students to be available once a week for short in-person meetings as well as the flexibility to take part in in-class activities to view real-time note-taking in classes using the ML program (8-10 hours per week total for these projects).

MARKING SCHEME (assignments with weight and due date):
Survey Proposal: 20% (Due November 15th, 2019)
Environmental literature scan: 20% (Due February 7th, 2020)
Final Report including data analysis 35% (Due March 20th, 2020)
Best practices proposal: 15% (Due April 3rd, 2020)
Oral Presentation: 10% (Due April 3rd, 2020)