MSE491: Application of Machine Learning in Mechatronic Systems

Lecture 0

Course Information

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Instructor and Lectures

- Instructor: Mohammad Narimani, *Ph.D.*, *P.Eng.*, *Lecturer*
  - Email: mnariman@sfu.ca
  - Office hours: by appointment via Zoom
  - Office: NA

- Lectures
  - Mondays, 2:30 – 4:20 pm (Bb Collaborate Ultra)
  - Wednesdays, 2:30 – 3:20 am (Bb Collaborate Ultra)

✓ Online Lecture notes are preferred for this course. Lecture times will be mostly used for catching up on lecture materials. Also, it will be used for the review of selected problems, guidance on course projects, general course material review, and assistance. To be discussed in the class.

- Online Labs:
  - Mondays, 4:30 – 7:20 pm (Bb Collaborate Ultra)
  - The structure of the labs will be discussed later

TAs

- TAs
  - Amin Kabir, Ph.D. student — email: amin_kabir@sfu.ca
  - Yasaman Vaghei, Ph.D. student — email: yvaghei@sfu.ca

Lab Schedule

- TBD (will be updated later)

Course Project

- Implementation of ML Algorithms for a Mechatronic System

  - Development of ML algorithms for a set of real-life data
  - Evaluation of the developed model
  - Implementation of the ML algorithm in an MCU platform

✓ **Note:** For grad students, the project a research project and the result will be in a conference paper format.

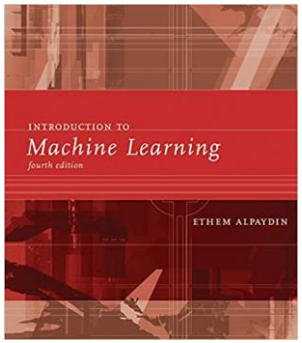
Course information

- Communications
  - All lectures will be recorded and posted on Canvas
  - All information on this course will be posted on **Canvas**
  - The following files have been posted:
    - **MSE491_Syllabus-2021.pdf**
    - **Lab Schedule and Information.pdf (soon)**

- Textbook

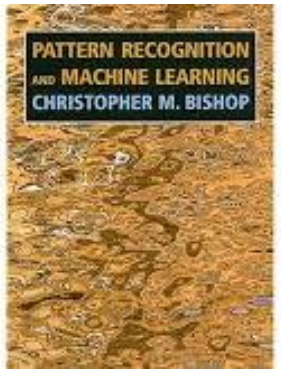
1-Introduction to Machine Learning,

4th Edition , by Ethem Alpaydin,
The MIT Press
ISBN 978-0262043793



2- Pattern Recognition and Machine Learning,

2nd Edition, by Christopher M. Bishop,
Springer, 2006,
ISBN 978-0387310732



Course grading

Evaluation Scheme:

Lab Assignments	40%	
Course Project	35%	
Midterm Exam1	10%	(February 22nd, on-line on Canvas)
Midterm Exam2	15%	(March 29th, on-line on Canvas)

(This grading scheme is tentative. The instructor reserves the right to change the scheme)

Policy on plagiarism

- Individuals found copying work (exams) will be awarded a grade of zero for the case, and subject to possible further penalties.

- All members in the group share responsibility in ensuring that submitted material has not been plagiarized.