Practical Machine Learning for Non-Data Science Students

DS 8015

INSTRUCTORS

- Dr Roy Kucukates (Section: 701E)
  - Research interests: 5G Network Intelligence, Enterprise Architecture
  - Email: roy.kucukates@ryerson.ca

SYLLABUS

- Lectures:
  - Mondays 6:00 - 8:00 PM (make sure you register through the Zoom link that will be published as an announcement)
- Labs:
  - Use your own computers. On Google Colab or Jupyter Notebook
  - Ever week's lab will be published on Monday, and to be completed by the students on their own before the lecture next week.
  - Lab solutions will be published on Fridays (4 days after the lab questions are published)
  - Labs will not be graded.
- Course website: D2L
  - Lecture videos & slides
  - Labs (weekly)
  - Assignments
  - Announcements
  - Project Topics

Ryerson University

SYLLABUS

- Grading:
  - Labs (11x) 0%
  - Assignments (3x) 60%
  - Final Project 40%
- Project:
  - There will be a group project graded as the Final
  - Project teams are supposed to prepare a proposal, prepare a report (document), and a presentation (during the final exam weeks)
- Assignments:
  - Should be done individually.
  - Late submissions will not be accepted!
  - No makeups!
- Textbook:
  - W. McKinney. *Python for Data Analysis*. 2nd Edition. O'Reilly Media, 2017
  - A Geron. *Hands-on Machine Learning with Scikit-Learn, Keras & TensorFlow*. 2nd Edition. O'Reilly Media, 2019.
- Programming language: Python

Ryerson University

TENTATIVE SCHEDULE

Week	Lecture #	Date	Lecture Topic	Lab	Assignment	Project
1	1	2021-01-17	Python Fundamentals	Lab 1		
2	2	2021-01-24	Data Structures	Lab 2		
3	3	2021-01-31	Functions, Functional Programming	Lab 3	Python Assignment #1	
4	4	2021-02-07	Python Libraries	Lab 4		
5	5	2021-02-14	Exploratory Data Analysis	Lab 5		Project Topics Published
6	-	2021-02-21	Family Day & Reading Week	-		
7	-	2021-02-28	Introduction to Machine Learning	Lab 6	ML Assignment #2	Project Groups and Topics Selected
8	6	2021-03-07	End to End Machine Learning Project	Lab 7		Project Proposals Submitted
9	7	2021-03-14	Unsupervised learning	Lab 8		
10	8	2021-03-21	Supervised Learning: Regression & Classification	Lab 9		
11	9	2021-03-28	Dimensionality Reduction	Lab 10	ML Assignment #3	
12	10	2021-04-04	Neural Networks	Lab 11		
13	11	2021-04-11	Final	-		Project Presentations
14	-	2021-04-18	Final	-		Project Presentations
15	-	2021-04-19		-		Project Reports Submitted

Figure: DS 8015 Winter 2022 Course Schedule

Grade Scale - Graduate

Letter Grades	Grade Points	Conversion Range, % Scale to Letter Grades
A+	4.33	90-100%
A	4.00	85-89%
A-	3.67	80-84%
B+	3.33	77-79%
B *	3.00	73-76%
B- **	2.67	70-72%
F	0	0-69%
FNA	0	NIL

* B is satisfactory performance level for Doctoral study

** B- is satisfactory performance level for Master's study

COMMUNICATION

- Best way is by email
- D2L discussion board (this also has the benefit of discussing topics amongst yourselves)

Academic Integrity

- Committing academic misconduct, such as plagiarism and cheating, will trigger academic penalties, including failing grades, suspension and possibly expulsion from the University.
- As a Ryerson student, you are responsible for familiarizing yourself with the Student Code of Academic Conduct
- http://www.ryerson.ca/senate/policies/pol60.pdf

MAKEUP POLICY

- Should a student miss a mid-term test or equivalent (e.g. studio or presentation), with appropriate documentation, normally a make-up will be scheduled as soon as possible in the same semester
- Medical or compassionate documents for the missing of an exam must be submitted within 3 working days of the exam
- Requests for accommodation of specific religious or spiritual observance must be presented to the instructor no later than two weeks prior to the conflict in question
  - In the case of final examinations within two weeks of the release of the examination schedule