

## Introduction to Machine Learning (CSC 311)

University of Toronto, Fall 2021 Course Information

### Important Links

- Course web site: [http://www.cs.toronto.edu/~rgrosse/courses/csc311\\_f21/](http://www.cs.toronto.edu/~rgrosse/courses/csc311_f21/)
- Markus: <https://markus.teach.cs.toronto.edu/csc311-2021-09/>
- Piazza: <https://piazza.com/utoronto.ca/fall2021/csc311>
- Quercus: <https://q.utoronto.ca/courses/234120>
- Zoom: See Quercus.

All course materials (schedule, lecture and tutorial slides, readings, homeworks) can be found on the course web site (see above).

### Instructors

Roger Grosse, Rahul Krishnan, and Guodong Zhang

### Schedule

Each section of this course corresponds to one lecture and one tutorial time. Due to the COVID-19 situation, class logistics (e.g. virtual vs. in-person) are subject to change, so please see the course website for up-to-date information.

- LEC0101, LEC0102, LEC2001: lecture Friday 11:00-13:00, tutorial Friday 15:00-16:00.
- LEC0201, LEC0202: lecture Thursday 16:00-18:00, tutorial Thursday 19:00-20:00.

See the course website for information about lecture and tutorial topics.

### Prerequisites

- **Programming Basics:** CSC207/ APS105/ APS106/ ESC180/ CSC180
- **Multivariate Calculus:** MAT235/ MAT237/ MAT257/ (minimum of 77% in MAT135 and MAT136)/ (minimum of 73% in MAT137)/ (minimum of 67% in MAT157)/ MAT291/ MAT294/ (minimum of 77% in MAT186, MAT187)/ (minimum of 73% in MAT194, MAT195)/ (minimum of 73% in ESC194, ESC195)
- **Linear Algebra:** MAT221/ MAT223/ MAT240/ MAT185/ MAT188
- **Probability:** STA237/ STA247/ STA255/ STA257/ STA286/ CHE223/ CME263/ MIE231/ MIE236/ MSE238/ ECE286
  - Due to the scheduling problems created by the cancellation of the winter offering, *just this year* we are allowing probability as a co-requisite. I.e., you may take the probability prerequisite concurrently with CSC311.

### Course Evaluation

We will follow the following marking scheme:

- 3 homework assignments (35%, weighted equally)
- Minor assignments (reflection and survey) for the embedded ethics unit (5%). A good faith effort results in full credit.

- Project (20%)
- 2 online tests (40%)
  - 1-hour online midterm test.
  - 2-hour online final exam during the exam period.
  - Weighting: higher of (15% midterm, 25% final) or (10% midterm, 30% final).

## Homeworks

There will be 4 assignments in this course. The assignments will be released on the course webpage.

**Format.** Homeworks must be submitted in PDF format through MarkUs. We encourage typesetting using L<sup>A</sup>T<sub>E</sub>X, but scans of handwritten solutions are also acceptable as long as they are legible.

**Lateness.** Homeworks will be accepted up to 3 days late, but 10% will be deducted for each day late, rounded up to the nearest day. No credit will be given for assignments submitted after 3 days.

**Weighting.** All homeworks will be weighted equally.

**Collaboration policy.** Collaboration on the assignments is not allowed. Each student is responsible for his/her own work. Discussion of assignments should be limited to clarification of the handout itself, and should not involve any sharing of pseudocode or code or simulation results. Violation of this policy is grounds for a semester grade of F, in accordance with university regulations.

**Remarks.** Remark requests should be made through MarkUs, and will be considered by the same TA who marked the assignment. The deadline for requesting a remark is one week after the marked assignments are returned. Remarks may result in a decrease in the grade.

## Exams

The online exams will be open-book, open-computer, but are to be done individually.

**Missed exams.** Missed exams will get a score of 0 except in the case of a valid medical reason or prior approval by the instructors.

- In case of illness, you should complete the absence declaration form on ACORN and notify the instructors to request special consideration.
- To obtain instructor approval for any other reason, the request must be made at least one week in advance of the exam date.