DAT203x: Data Science and Machine Learning Essentials

Course Prerequisites

To complete this course successfully, students should meet the following prerequisites:

- Familiarity with basic mathematics
- Introductory level knowledge of either R or Python is preferable; but not required
- Experience with Microsoft Azure is preferable; but not required
- A willingness to learn actively and persevere when troubleshooting technical problems is essential.

Course Outline

Week 1

Course Introduction

01 | Introduction and Data Science Theory

Week 2

02 | Working with Data

Week 3

03 | Visualization, and Building and Evaluating Models

Week 4

04 | Regression, Classification, and Unsupervised Learning

Week 4

05 | Recommenders and Publishing your Work
Final Exam

Expected Effort

Each week, you should expect to spend 3-4 hours on the course, including:

- Viewing the lecture videos and demonstrations.
- Further reading.
- Trying the labs.
- Completing coursework (see below).

Coursework and Grading

This course includes coursework, some of which is graded. Each module in the course includes an ungraded lab (which is designed to give you hands-on practice with the Hadoop technologies taught in the module), and a graded assessment, in which you must answer all questions. Additionally, at the end of the course you must complete a final exam.

The module assessments account for 50% of the total grading for the course, and the final exam accounts for the remaining 50%. You must achieve an overall score of 50% or more to pass this course.

In the module assessments, you have two attempts at each question. In the final exam, you are restricted to one attempt per question.

Discussion

We encourage all students to submit questions, observations, and comments in the **Discussion** section. If you have any issues while working on the course, check here first – your fellow students may have already found a resolution!

Please remember that the discussion forum is open to all students and staff, and while we love to see passionate engagement, abusive or inflammatory behavior will not be tolerated.

Due to the volume of students attending this course, it will not be possible for the course staff to answer every question individually. You should still post questions however, because in many cases, your fellow students may be able to help.