

DATA5000, Winter 2021

Introduction to Data Science

Lectures

Thursdays 11:35-2:25 pm

Start date: January 14

Location: over Zoom

Course Website

<http://people.scs.carleton.ca/~majidkomeili/Teaching/DATA5000-W21/home.html>

Instructors

Majid Komeili

Email: majid.komeili AT carleton.ca

Office Hours: by appointment

Elio Velazquez

Email: Elio.Velazquez AT carleton.ca

Office Hours: by appointment

Michael Genkin

Email: Michael.Genkin AT carleton.ca

Office Hours: by appointment

Course Description

The course covers topics relevant to data science: working with data, exploratory data analysis, data mining, machine learning. The concepts are illustrated using the R language. Students also receive hands-on tutorials to IBM Cognos Analytics, Tableau, etc. Students will be evaluated by their course projects. The course will be lecture-based and will also offer some hands-on tutorials. The project component will be flexible and will involve data collection, manipulation, and analysis.

Tentative Course Schedule

- Thursday January 14, 2021 - Lecture 1: What is Data Science?.
- Thursday January 21, 2021 - Lecture 2: Working with Data.
- Thursday January 28, 2021 - Lecture 3: Visualization and Exploration.

- Thursday February 4, 2020 - Lecture 4: Data Mining and Machine Learning I.
- Thursday February 11, 2020 - Lecture 5: Machine Learning II.
- Thursday February 18, 2020 - NO CLASS (Winter Break)
- Thursday February 25, 2020 - IBM Watson Studio Tutorial.
- Thursday March 4, 2020 - IBM Cognos Analytics Tutorial.
- Thursday March 11, 2020 - Tableau Tutorial.
- Thursday March 18, 2020 - Guest Lecture.
- Thursday March 25, 2020 - Guest Lecture.
- Thursday April 1, 2020 - Project Presentations.
- Thursday April 8, 2020 - Project Presentations.

Evaluation

- Paper presentation: 10% (paper selection due January 28)
- Project proposal: 10% (due January 28, 11:59 PM)
- Presentation outlines: 5% (due March 11, 11:59 PM)
- Poster presentation: 15% (submission due March 23, to be presented on Data Day)
- Project presentation: 10% (in class on April 1 and April 8)
- Project report: 50% (due April 15, 11:59 PM)

Academic Integrity

Academic Integrity is everyone's business because academic dishonesty affects the quality of every Carleton degree. Each year students are caught in violation of academic integrity and found guilty of plagiarism and cheating. In many instances they could have avoided failing an assignment or a course simply by learning the proper rules of citation. See the [Academic Integrity](#) for more information.

Information on Academic Accommodations

Requests for Academic Accommodation

You may need special arrangements to meet your academic obligations during the term. For an accommodation request, the processes are as follows:

Pregnancy obligation

Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit the Equity Services website: carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf

Religious obligation

Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit the Equity Services website: carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf

Academic Accommodations for Students with Disabilities

If you have a documented disability requiring academic accommodations in this course, please contact the Paul Menton Centre for Students with Disabilities (PMC) at 613-520-6608 or pmc@carleton.ca for a formal evaluation or contact your PMC coordinator to send your instructor your Letter of Accommodation at the beginning of the term. You must also contact the PMC no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with your instructor as soon as possible to ensure accommodation arrangements are made. carleton.ca/pmc

Survivors of Sexual Violence

As a community, Carleton University is committed to maintaining a positive learning, working and living environment where sexual violence will not be tolerated, and its survivors are supported through academic accommodations as per Carleton's Sexual Violence Policy. For more information about the services available at the university and to obtain information about sexual violence and/or support, visit: carleton.ca/sexual-violence-support

Accommodation for Student Activities

Carleton University recognizes the substantial benefits, both to the individual student and for the university, that result from a student participating in activities beyond the classroom experience. Reasonable accommodation must be provided to students who compete or perform at the national or international level. Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. <https://carleton.ca/senate/wp-content/uploads/Accommodation-for-Student-Activities-1.pdf>

For more information on academic accommodation, please contact the departmental administrator or visit: students.carleton.ca/course-outline