

DATA5000W/COMP4900W, Winter 2025

Introduction to Data Science

Lectures

Thursdays 11:35-2:25 pm

Start date: January 9

Location: check Carleton Central for room location

Course Website

<http://people.scs.carleton.ca/~majidkomeili/Teaching/DATA5000-W25/home.html>

Instructors

Majid Komeili

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Note: same course outline applies to all sections of DATA 5000.

Teaching Assistant

Adnan Khan

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Office Hours: TBA

Course Description

Machine learning; statistics; data science; data ethics; data cleaning; data preparation; data visualization; communication skills to explain advanced analytics. Students work on an interdisciplinary project in data science.

Tentative Course Schedule

- Thursday January 9- Lecture 1: Introduction
- Thursday January 16 - Lecture 2: Working with Data.
- Thursday January 23 - Lecture 3: Visualization and Exploration.
- Thursday January 30 - Lecture 4: Machine Learning I.
- Thursday February 6 - Lecture 5: Machine Learning II.
- Thursday February 13 - Paper Presentation.
- Thursday February 20 - No Class (Winter Break)
- Thursday February 27 - Tutorial or guest lectures.
- Thursday March 6 - Tutorial or guest lectures.
- Thursday March 13 - Tutorial or guest lectures.
- Thursday March 20 - Tutorial or guest lectures.
- Thursday March 27 - Project Presentations.
- Thursday April 3 - Project Presentations.

Check the course website for up-to-date schedule.

Evaluation

- Project proposal: 10% (due January 23, 11:59 PM)
- Paper selection: 0% (due January 30)
- Paper presentation: 10% (February 13)
- Progress report: 10% (due March 4)
- Class participation and discussions: 5%
- Project presentation: 15% (in class on March 27 and April 3)
- Project report: 50% (due April 10, 11:59 PM)

Data Day Conference

This year, the Data Day conference may be replaced by another conference. Its date is not announced yet. Therefore, it is removed from the course schedule and course evaluation. The above course schedule may be revised to accommodate participation in the conference. In that case, course evaluation may also be revised to accommodate those participating in the conference and presenting their project.

Learning Material

Slides will be posted in Brightspace. No mandatory textbook, but a few good textbooks will be recommended. They are available online at no cost. For the course project, you will need a computer and maybe a subscription to some cloud services for additional computing capabilities to meet your project's needs. The cost varies depending on your project.

Mental Health and Wellness

The [Carleton Wellness Website](#) is a wonderful resource link to include in the course outline for students.

Academic Accommodations

Carleton is committed to providing academic accessibility for all individuals. Please review the academic accommodation available to students here: <https://students.carleton.ca/course-outline/>.

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

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.

Every student should be familiar with the Carleton University Student Academic Integrity policy. A student found in violation of academic integrity standards may be sanctioned with penalties which range from a reprimand to receiving a grade of F in the course, or even being suspended or expelled from the University. Examples of punishable offences include plagiarism and unauthorized collaboration. Any such reported offences will be reviewed by the office of the Dean of Science. More information on this policy may be found on here: <https://carleton.ca/registrar/academic-integrity/>

As defined by Senate, "plagiarism is presenting, whether intentional or not, the ideas, expression of ideas or work of others as one's own". Such reported offences will be reviewed by the office of the Dean of Science. More information and standard sanction guidelines can be found here: <https://science.carleton.ca/students/academic-integrity/>.