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COMP 451 Fundamentals of Machine Learning (3 credits)

Offered by: Computer Science ([Faculty of Science \(/study/2022-2023/faculties/science\)](#))

Overview

Computer Science (Sci) : Introduction to the computational, statistical and mathematical foundations of machine learning. Algorithms for both supervised learning and unsupervised learning. Maximum likelihood estimation, neural networks, and regularization.

Terms: Fall 2022

Instructors: Ravanbakhsh, Siamak (Fall)

- Prerequisite: [COMP 251 \(/study/2022-2023/courses/comp-251\)](#), [MATH 222 \(/study/2022-2023/courses/math-222\)](#), [MATH 223 \(/study/2022-2023/courses/math-223\)](#), and [MATH 323 \(/study/2022-2023/courses/math-323\)](#).
- Restriction: Not open to students who are taking or have taken [COMP 551 \(/study/2022-2023/courses/comp-551\)](#).

This course may be used as a required or complementary course in the following programs:

[Bachelor of Arts and Science \(B.A. & Sc.\) - Honours Cognitive Science \(/https://www.mcgill.ca/study/2022-2023/faculties/basc/undergraduate/programs/bachelor-arts-and-science-ba-sc-honours-cognitive-science\)](#)

[Bachelor of Arts and Science \(B.A. & Sc.\) - Interfaculty Program Cognitive Science \(/https://www.mcgill.ca/study/2022-2023/faculties/basc/undergraduate/programs/bachelor-arts-and-science-ba-sc-interfaculty-program-cognitive-science\)](#)

[Bachelor of Science \(B.Sc.\) - Honours Probability and Statistics \(/https://www.mcgill.ca/study/2022-2023/faculties/science/undergraduate/programs/bachelor-science-bsc-honours-probability-and-statistics\)](#)

[Bachelor of Science \(B.Sc.\) - Honours Probability and Statistics](#)

[. \(https://www.mcgill.ca/study/2022-2023/faculties/arts/undergraduate/programs/bachelor-science-bsc-honours-probability-and-statistics\)](https://www.mcgill.ca/study/2022-2023/faculties/arts/undergraduate/programs/bachelor-science-bsc-honours-probability-and-statistics)

[Bachelor of Science \(B.Sc.\) - Major Statistics
\(https://www.mcgill.ca/study/2022-2023/faculties/science/undergraduate/programs/bachelor-science-bsc-major-statistics\)](https://www.mcgill.ca/study/2022-2023/faculties/science/undergraduate/programs/bachelor-science-bsc-major-statistics)

[Bachelor of Science \(B.Sc.\) - Minor Statistics
\(https://www.mcgill.ca/study/2022-2023/faculties/science/undergraduate/programs/bachelor-science-bsc-minor-statistics\)](https://www.mcgill.ca/study/2022-2023/faculties/science/undergraduate/programs/bachelor-science-bsc-minor-statistics)



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