

SHEREEN ELAIDI

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EDUCATION

McGill University, Montreal

B.A. in Honours Mathematics, Computer Science minor
Department of Mathematics & Statistics

September 2017 - May 2021 (expected)

McGill University, Montreal

B.A. in Political Science and Economics
Department of Political Science and Economics

September 2016 - May 2017

RESEARCH EXPERIENCE

Mathematics and Statistics Department Undergrad Research (May 2020 - August 2020)

1. The study of the wave equation in cosmological space-times.

Canadian Centre for Computational Genomics (C3G) (May 2019 - August 2019)

1. Installed the whole genome shotgun (WGS) sequencing program, MOCAT2, on the lab's computing clusters. Wrote a pipeline to use MOCAT2 to analyse the influence of the gut's microbiome on the development of fibromyalgia.
2. Modified MOCAT2's code to reduce the run-time and RAM usage. Using this pipeline, I analysed 156 samples from patients in order to determine the influence, if any, of the gut's microbiome on developing fibromyalgia.

McGill Space Institute (MSI) (February 2018 - August 2018)

1. Wrote and debugged a Python program to compute light-curves from exoplanets. Light curves encode information about an exoplanet's atmosphere, which is useful for exoplanet mapping.
2. Attended weekly meetings discussing recent developments in astrophysics research and volunteered for science out-reach programs held by the MSI.

TALKS

1. "A Brief Introduction to Ergodic Theory" presented at Seminary on Undergraduate Mathematics in Montreal (SUMM) in January 2020. (Beamer: https://drive.google.com/open?id=1y6UvLL-1YH2WD_Fx0k34ELeRB9qN9WSb)
2. "Building up to Lorentzian Causality Theory" presented at the Directed Reading Program talks in January 2020. (Beamer: <https://drive.google.com/open?id=1Z8z-tljFwhQLlnuQANNXHIXODsa3nZfR>).

WORK AND EXTRACURRICULAR EXPERIENCES

SUMS VP Academic (May 2019 - Present)

1. VP Academic position on SUMS (McGill's mathematics undergraduate society).

Undergraduate Marker in the Math Department (January 2019 - December 2019)

Winter 2019: Math 247 (H. Applied Linear Algebra), Summer 2019: Math 203 (Introduction to Statistics), and Fall 2019: Math 254 (H. Analysis 1).

Directed Reading Program (September 2019 - January 2020)

1. Project topic: Lorentzian Causality Theory.

Mathematics Peer Mentor (December 2019 - Present)

1. Acts as a mentor to a U0 or U1 math student by helping them adjust to university and Montreal.

McGill NeuroTech Team (June 2019 - August 2019)

1. Contributed to NeuroTech's Summer 2019 project, which was to develop a game to collect data for a brain-controlled wheelchair.
2. Read academic papers about Spiking Neural Nets (SNNs).
3. Implemented an LSTM model to predict "left" or "right" brain signals using TensorFlow.

AI For Social Good (May 2018 - June 2018)

1. Attended three weeks of machine learning lectures.
2. Worked on an app to predict the most dangerous times and locations to ride a bicycle in Montreal.
3. Worked on a project to predict if a picture featured a construction site or not to help blind individuals navigate Montreal at the AI4Good Hackathon.

Minireference (February 2018 - April 2018)

Used the TikZ package in LaTeX to produce 40 vector graphics for a linear algebra textbook.

Hannaford Supermarket (June 2015 - December 2017)

Worked as a cashier, bagger, and cart retriever.

TECHNICAL STRENGTHS

Programming Languages
Software & Tools

Bash scripting, Python, R, Java, and HTML.
TensorFlow, GitHub, Unix, Linux, LaTeX, MOCAT.