

Edward (Eddie) Guo

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Education

University of Oxford **May 2021 – Present**
Neuroimaging and Stem Cell Engineering, Study Abroad Term at New College

University of Alberta **Sep. 2020 – Present**
Bachelor of Science in Engineering Physics (GPA: 4.00/4.00)

University of Alberta **Sep. 2018 – Apr. 2020**
Bachelor of Science Honours Neuroscience (GPA: 4.00/4.00)
Transferred to the Faculty of Engineering at the University of Alberta

Employment

Undergraduate Teaching Assistant **Sep. 2020 – May 2021**
Introduction to Tangible Computing I & II (CMPUT 274 & 275), University of Alberta

- Provided personalized student support during office hours and class time to a class of 160+ students.
- CMPUT 274 & 275 is the honours stream of introductory CS and Computer Engineering courses at the University of Alberta. Topics include introductory programming, data structures, and algorithms in Python and C++.

Undergraduate Research Student **Oct. 2018 – Oct. 2021**
Zochodne Lab

- Studied the effects of acute and chronic cutaneous denervation on differential mRNA expression in skin keratinocytes.

Scholarly Activities

Paper Presentation at the Canadian Society for the Study of Education Conference **Jun. 2021**
• Paper titled “Deepening Undergraduate Student Understanding of Science Inquiry by Reflecting on the Creation and Enactment of a Citizen Science Project.”

- Authors: Becker, S., Clark, D., Gupta, M., Kannappan, S., Wong, B., Hernandez-Zavaleta, E., and **Guo, E.**

Peer Reviewer for the Muscle & Nerve Medical Journal **Aug. 2020**
• Served as a peer reviewer for a bioinformatics paper.

Alberta Innovates Summer Research Studentship **Apr. 2020**
• Grant for summer research project titled “Skin and Nerves: Understanding the dialogue between axons and skin cells to restore sensation.” Awarded by the Undergraduate Research Initiative, University of Alberta.

Office of the Provost and VP (Academic) Summer Studentship Award **May 2019**
• Grant for summer research project titled “Axon regrowth and plasticity in diabetic neuropathy: the role of growth cone molecules.” Awarded by the Faculty of Medicine and Dentistry, University of Alberta.

Technical Skills

Programming: R, Python, C++, MATLAB

Markup and Version Control: \LaTeX , HTML, CSS, Git

Software: Excel, FMRIB Software Library

Project Experience

Interactive Statistics Applications

May 2021 – Present

- Created interactive websites with R Shiny for statistical concepts. View the [simple linear regression website](#).
- Developed the website as a study resource for my peers.

Deep Learning Transcriptomic Model for Chemotherapies

May 2020 – Jun. 2020

- Used clustering algorithms, feature selection algorithms, and neural networks using Keras and scikit-learn to classify human cell lines into therapeutic response groups.

Volunteering

Youreka Canada

Associate Director of Programs, Youreka Canada

May 2020 – Present

- Leading the Programs Department to develop the Youreka national curriculum, which provides 15,000+ hours of research and data science education for 150+ high school and undergraduate students annually across Canada.
- Collaborating with the Clark laboratory at the Werklund School of Education at the University of Calgary to develop a multi-year research study of the educational effectiveness of the Youreka program.
- Collaborating with the City of Edmonton Neighbourhood Empowerment Team to address youth unemployment.
- Authored an [interactive e-textbook on R programming and data science](#) currently used by 150+ students across Canada.
- Co-directed a hackathon that attracted 100+ students across Canada.

Vice President of Academics, Youreka Edmonton

May 2019 – Jun. 2021

- Taught a ten-week program to a cohort of 30 high school and undergraduate students.
- Provided introductory statistics lectures to all Youreka Canada branches during the COVID-19 pandemic.
- Spearheaded a pilot project that doubled student enrollment from 30 to 60 students from 2019 to 2020.

Select Honours and Awards

Louise McKinney Post-Secondary Scholarship

Dec. 2019, Sep. 2020

- Awarded to the top 1.5-2% of students based on GPA at the University of Alberta. Awarded twice.

Undergraduate Big Data Challenge Research Excellence Award

Jul. 2020

- Project titled “Deep learning transcriptomic model for prediction of pan-drug chemotherapeutic sensitivity.”
- 524 participants across Canada and United States of America. See the [manuscript and source code](#).

COVID-19 Data Science Hackathon Post-Secondary Student Award

May 2020

- Developed an interactive application using a regression model to better understand the impacts of age, poverty, income, and population density on the spread of the COVID-19 virus.
- Media coverage: [University of Alberta Folio article](#) and the [Genome Alberta podcast](#).

Sci5 Outstanding Achievement in Science Scholarship

Apr. 2019, Mar. 2020

- Awarded to 4 well-rounded students with strong academic achievement, extracurricular involvement, and recommendation letters in the Faculty of Science at the University of Alberta. Awarded twice.

Thirst 4 Knowledge Undergraduate Leadership Scholarship

Sep. 2019

- Awarded to students at the University of Alberta with superior academic achievement who demonstrate leadership through involvement and participation in university or community organizations, sports activities, or cultural activities.