Darryen Sands

Oshawa, Ontario | On request | darryensands@gmail.com | Github

Experience

Ontario Tech University — **September 2022 - April 2025**
Teaching Assistant — Oshawa, Ontario

- Worked as a teaching assistant for introductory linear algebra courses for engineering and science students, where classes comprised 30-40 students per tutorial.
- Graded assessments and provided feedback to over 200 students, contributing to enhanced comprehension.

Ontario Tech University — **September 2022 - January 2025**
Graduate Research Assistant — Oshawa, Ontario

- Developed and mathematically justified an algorithm that can detect communities in discrete-time Markov chains.
- Wrote a thesis regarding my algorithm and compared it to other state of the art algorithms in a variety of statistics.

Durham Region Unemployed Help Centre — **June 2022 - August 2022**
Digital Literacy Facilitator — Oshawa, Ontario

- I developed a 4-day workshop that taught basic computer usage.
- Provided an interactive experience where clients could learn hands-on.

Ontario Tech University — **September 2021 - January 2022**
Laboratory Instructor — Oshawa, Ontario

- Taught a lab of 20 students the basics of the Linux operating system and the terminal for Mechanics I.
- Conducted preparation of lab environments and Raspberry Pis for computational physics experiments.

Community Living Oshawa/Clarington — **June 2019 - August 2019**
IT Assistant — Oshawa, Ontario

- Listened to coworkers describe the issues with their computers, printers, or software; assessed issues and effectively resolved problems.
- Called and emailed service companies, such as internet providers, to receive assistance in resolving technical issues.

Education

Ontario Tech University — **September 2022 - January 2025**
Modelling and Computational Science — Masters of Science
GPA: 4.0 / 4.3

- Wrote my thesis titled "Cluster Detection in General Markov Chains with Applications to Directed Networks".

Ontario Tech University — **September 2016 - May 2022**
Physics & Applied and Industrial Mathematics — Bachelors of Science (Honours)

- Wrote my undergraduate thesis titled "Detection of Gravitational Waves Using Machine Learning".
- Volunteered as the President of the Physics Society, an undergraduate club for students to learn and interact with physics.

Projects

Solving PDEs with Deep Learning — **September 2021 - December 2021**
An upper-year course project involved using a deep learning library DeepXDE to solve partial differential equations. My team discussed the advantages and disadvantages over other solutions to PDEs.

Python, Tensorflow, Mathematics

Fraudulent Credit Transaction Detection — **September 2021 - December 2021**
An upper-year course project where we used a neural network to analyze a skewed dataset and detect fraudulent transactions.

Python, Pandas, Tensorflow

Real-Time Translation Glasses — **May 2020 - August 2020**
My team proposed glasses that could translate language”on-the-fly” for a competition. We ranked as one of the top four teams.

Computer vision, Python, Product design

Skills

Javascript	**C++**	**C**
MATLAB	**Python**	**Linux**
Mathematics	**Physics**	**Git**
Java	**Microsoft Office**	**Tensorflow**
Keras	**Html**	**CSS**

Awards

Dean's list — **2019, 2020, 2021**
Ontario Tech University

Achieved a semester GPA of 3.5 or higher (on a 4.3 scale).

President's list — **2020**
Ontario Tech University

Achieved a semester GPA of 3.8 or higher (on a 4.3 scale).