RACHEL BRODERS

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SKILLS

Language : Python | C | SQL | Java | JavaScript | SQL | R | HTML/CSS

Frameworks and Libraries: NumPy | MatplotLib | Tk GUI Toolkit | JavaFX | Node.js | Tensorflow | AJAX/jQuery

Tools: Git | PostgreSQL | MySQL

PROFILE

- **Looking for software development or related experience in tech industry**
- Experience in designing, developing, implementing and testing software
- **Deans Honours List** from the College of Physical and Engineering Science
- Fast learner, independent, problem solver

EXPERIENCE

Quantum Intelligence Lab (PIQuIL) Research Position

Perimeter Institute and University of Waterloo

📅 Sept 2020 – Jan 2021   📍 Waterloo, ON

- Designed and implemented, using **Python** and **OOP** principles, an image processing algorithm to estimate positions of ions in images from a quantum simulator
- Developed organized code with clear documentation
- Studied **machine learning** and **Tensorflow**
- Worked both independently and collaboratively

Undergraduate Teaching Assistant

University of Guelph

📅 Sept 2019 – Present   📍 Guelph, ON

- Serviced 10+ first and second year statistics and mathematics courses.
- Helped 100+ students develop knowledge in course material.
- Supported students in completing assignments and exam preparation.
- Managed and taught students in a **remote work environment**

NSERC Undergraduate Research Assistant

University of Guelph

📅 May 2019 – Sept 2019   📍 Guelph, ON

- Refactored existing code base improving the usability and functionalities of a GUI using **Python TkInter**
- Created digital elevation models (graphic of geographic data) using command line interface (CLI)
- Refined geographical data using QGIS to assess accessibility of city sidewalks.

PROJECTS

Courselink Monitoring Automation Project

Personal Project
Python, Selenium Webdriver

📅 2020 – Current

- Designed and implemented a managing program that automated repetitive teaching assistant tasks
- Created notification functionality to indicate new students requesting help
- Web scraped to collect information on student activity using **Selenuim Webdriver**.
- Automated login/logoff process based on predefined shift schedule

AWARDS

- University of Guelph Board of Governors Scholarship, Sep 2017 - Apr 2021
  - 1 of 25 highest admission averages
- Weiner Family Scholarship, Sep 2018 - Apr 2020
  - **Highest average** in second and third year in Dept. of Math/Stats
- Michele and Maria Vannelli Scholarship, Sep 2018 - Apr 2019
  - High cumulative average and **demonstrated leadership** in the College of Physical and Engineering Science
- Ted Newton Memorial Scholarship, Sep 2017 - Apr 2018
  - Highest average among first year students in Dept. of Math/Stats

EDUCATION

University of Guelph

Double Degree
Bachelors of Computer Science Honours
Bachelors of Science Honours

📅 Sep 2017 - Apr 2022

- Computer Science
  - Full stack development
  - Object Orientated Programming (OOP)
  - Data Structures, Algorithms, Databases
- Mathematical Sciences, Statistics Stream
  - Discrete Structures
  - Numerical Methods, Linear Algebra
  - Probability, Linear Regression