

Zoey Drassinower

Email: zoey.drassinower@gmail.com | Phone: 416-606-2052 | Website: zoeyzwee.github.io

Zoey Drassinower (they/she) is a recent university graduate with B.Sc. in Computing, Math and Analytics. Completed several research contracts in graduate-level labs conducting novel research. Seeking to leverage strong analytical and communications skills in project-based professional environments.

Education

Bachelors in Computing (Honours) w/ Specialization in Computing and Mathematics from Queen's University

Academic Work Experience

Research Contracts

- May 2023 – May 2024** **Summer Research/Undergraduate Final Project (High Dimensional Feature Selection), Queen's University**
Applying statistical methods to identify key molecules in fungi and hot sauce.
Supervised by Prof. Randy Ellis, funded by NSERC USRA grant.
- Reviewed current literature to select algorithms from relevant academic papers
 - Implemented and applied algorithms to very high dimensional data
 - Visualized and presented results to peers and supervisors
- May 2022 – Aug 2022** **Summer Research (Soccer Analytics), Queen's University**
Modelling successful offensive progressions in soccer using player tracking data.
Supervised by Prof. Catherine Pfaff.
- Improved transformation algorithms, resulting in 20x faster code execution
 - Migrated workflow to run in Docker containers

Teaching Assistant Contracts

- Winter 2024** **(TA) Artificial Intelligence (300-level), Queen's University**
Introduction to AI topics, such as Bayesian reasoning, automated planning and neural networks.
Course taught by Prof. Christian Muise.
- Standard TA responsibilities (grading, office hours, etc.)
 - Identified and corrected bugs in auto-grader scripts
 - Updated assignment code to be compatible with modern python versions
- Fall 2023** **(Head TA) Programming Paradigms (300-level) Queen's University**
Introduction to functional and declarative programming languages (Haskell, Prolog).
Course taught by Prof. Jana Dunfield.
- Standard TA responsibilities (grading, office hours, etc.)
 - Allocated and managed responsibilities of other TAs
 - Wrote and recorded videos teaching review materials
 - Wrote and recorded videos teaching intuition behind course concepts
- Fall 2022** **(TA) Programming Paradigms (300-level) Queen's University**
Winter 2023 Introduction to AI topics, such as Bayesian reasoning, automated planning and neural networks.
Course taught by Prof. Christian Muise.
- Standard TA responsibilities (grading, office hours, etc.)
 - Created exam prep materials
 - Taught exam prep tutorials

Teaching and Mentoring Experience

Jan 2024 – Apr 2024* **Introductory Programming Lessons*

- Taught weekly 1-on-1 programming lessons (in person) to a 1st year math student with no prior coding experience
- Designed a personalized lesson plan, tailored to meet the goals of the student
- Supplemented lessons with “workplace computing skills” such as debugging, documentation, style, and Git

Jun 2019 – Apr 2024* **Various Math and Physics Tutoring*

- Tutored students taking 1st and 2nd year math and physics courses

Grants and Awards

May 2023* **Undergraduate Summer Research Award** (*Natural Sciences and Engineering Research Council of Canada*) - **\$9800*

- Awarded each year to 3000 Canadian STEM undergraduates conducting novel research over the summer

***Jan 2024* **Dean's Award of Excellence** (*Queen's University*)**

- Awarded to undergraduates with GPA in the top 0.5% of GPAs in the Faculty of Arts and Sciences at Queen's

Independent Projects

A complete list of projects and write-ups can be found at my portfolio site: zoeyzwee.github.io

Py2048-ML v2 (Python)

- Re-creating the 2048 agent described in the Stochastic MuZero paper by Deep Mind
- Applies multiple state of the art techniques in deep reinforcement learning, such as reward scaling, prioritized replay buffers, Monte-Carlo tree search, residual networks, layer-normalization
- Neural networks built using TensorFlow

Zoelver (Python/Rust)

- A classical planner, prototyped in Python and built in Rust, implementing a variety of classical planning strategies

Baseball Tracking Dashboard (Python)

- A custom data dashboard for analyzing batter tendencies
- Built and hosted via Streamlit
- Created as part of the 2024 Women in Sports Data Hackathon

Other Interests

Songwriting and Performance

- 15 years of vocal training at ProVoce Studios and Free Your Voice coaching
- Participated in Artist Development/Songwriter workshops at Lawson Vocal Studios
- Played hired performances at on-campus events throughout university
- Self-produced and recorded original song: Run Down

Competitive Ultimate Frisbee

- 1 season of varsity at Queen's University (2023-2024)
- 1 season of competitive tournaments w/ Toronto Remix (2024)