## **Tyler Mainguy**

**TripAdvisor** 

#### **Employment**

#### **Software Engineering Intern**

Search and Navigation

- Stabilized site errors and corrected bugs in functionality resulting in improvement of user experience.
- Wrote sophisticated SQL queries to analyze the patterns of attrition amongst users.
- Reviewed code and communicated effectively with teammates to ensure quality of code and architecture.

#### **Software Development Intern**

• Researching and developing a test harness for the existing codebase (front-end and API testing), using Jest and Enzyme.

**DemandHub** 

- Full stack development of various application components using React and Node.
- Accessibility and responsiveness changes throughout the existing codebase.

#### **Teaching Assistant**

- · Courses: Object-Oriented Programming, Algorithms, Linear Optimization, Formal Methods in Software Engineering.
- Promoted to Head TA in Linear Optimization; led weekly meetings, handled grade distribution, and supervised team of TAs.

**Queen's University** 

#### Education

Kingston, ON

### • M.Sc. in Computer Information Science with Specialization in Artificial Intelligence, Spring 2022. GPA: 4.23/4.30

- B.S. in Computer Science with Specialization in Computing and Mathematics, May 2020. GPA: 3.97/4.30
- Graduate Thesis: Deep Clustering of Mass Spectrometry Imaging Using Variational Autoencoders.
- Graduate Coursework: Medical Imaging and Signal Processing, Data Mining, Deep Learning, Reinforcement Learning, Research Methods in Computer Science.
- Undergraduate Coursework: Data Structures, Algorithms, Software Architecture, Object-Oriented Programming, Formal Methods in Software Engineering, Image Processing, Operating Systems.

#### **Technical Experience**

#### **Projects**

- Graduate Thesis (2021-2022). Developed a deep learning model to cluster mass spectrometry imaging (MSI) data. Python, Matlab.
- DOOM RL (2021). Developed reinforcement learning agent to learn how to play the video game DOOM. Python.
- Camelyon WSI Challenge (2021). Developed a recurrent attention model for classification of low-resolution histopathology data. Python.

#### Languages and Technologies

- Javascript; Python; React; Node; SQL; Java.
- Visual Studio Code; Unix-based OS; Unix-based Terminal; Git/Github.

#### **Summer 2018**

Summer 2019

# **Queen's University**

#### Fall 2017 - Spring 2022

Fall 2018 - Fall 2021