Yuxuan Yao

Software Engineering · Deep Learning Research

(+1) 604-721-9226 | yuxuan.yao@mail.utoronto.ca | www.yuxuanyyx.com | github.com/yuxuanyao | linkedin.com/in/yuxuan-yao/

Education

University of Toronto, St.George — *Toronto, ON, Canada*

B.S. in Computer Engineering — *Sep. 2017 - Exp. May. 2021*

- CGPA: 3.52 / 4.0
- Awards: B.C. Achievement Scholarship, National AP Scholar (Canada)
- Dean's List Honour: Fall '17, Winter '18, Fall '18

Work Experience

Huawei Canada R&D — *Kanata, ON, Canada*

Deep Learning Research Intern (Support Engineer) — *May. 2019 - Aug. 2019*

- Architected TensorFlow-based deep generative models as prototypes to potentially gain a budget of $2M for the research project.
- Developed Normalizing Flows and Wavenet models to verify that AI-based methods can optimize wireless communication procedures.
- Implemented a dynamic programming algorithm utilizing Variational Autoencoder outputs to improve signal noise-tolerance by over 10x.
- Visualized research and experimental results to be used on 5G/pre-6G Technologies using matplotlib, Numpy, and IPython.

RoboEdu — *Toronto, ON, Canada*

Software/Robotics Instructor — *Jun. 2018 - Sep. 2018*

- Educated over 30 students on computer science and 3D design concepts with Java, Scratch, Lego Mindstorm, TinkerCAD, VEX IQ.
- Developed a curriculum for students to implement games like Mario and Pacman in Scratch to accelerate the original curriculum by over 3X.

Projects and Competitions

GIS Mapping/Routing Application — *University of Toronto, Ontario*

FastMap — *Jan. 2019 - Apr. 2019*

- Developed in C++, a mapping/path-finding application that enhances courier deliveries with the use of STL, Boost, EZGL, and OSM database.
- Implemented graph algorithms including BFS, Dijkstra's and A* algorithms to find paths for navigation and optimized for a 5x runtime speed-up.
- Optimized with multi-threading and iterative algorithms (k-Opts) to be ranked 11/110 teams in the faculty for the quality of our Courier Algorithm.

TreeHacks — *Stanford University, California*

TurnDownForWhat — *Feb. 2019*

- Architected a Node.js server to convert FormData voice input into streams for integrating the voice assistant with the mobile interface.
- Detected movement using the smartphone accelerometer to lower music volume when falling asleep with React-Native.

UofTHacks — *University of Toronto, Ontario*

EtherRide — *Jan. 2019*

- Received the Best Aragon App by ChainSafe award out of 102 team submissions.
- Developed client and server applications to monitor Ethers.js Smart Contracts and interface with APIs through HTTP to unlock a Tesla.

HackPrinceton — *Princeton University, New Jersey*

Avacancy — *Nov. 2018*

- Processed video footage of parking lot surveillance camera through perspective transform and binarization to detect vehicles.
- Utilized openCV to identify locations of vacant parking space within the video footage and mapped out real-time parking availability.

Extracurricular Leadership

UTRA (University of Toronto Robotics Association) — *Toronto, ON, Canada*

Sponsorships Director in 2018 & Webmaster and Hackathon Lead in 2019 — *Sep. 2017 - Current*

- Recruited and managed a team of eight to plan and organize UtraHacks as the Executive Team Lead to gather over 200 attendees.
- Acquired sponsorship from Solidworks, Particle, Leapmotion, Nvidia and more, totaling over $5000 in value.

IEEE University of Toronto Student Branch — *Toronto, ON, Canada*

Marketing Associate — *Apr. 2019 - Current*

- Promoted software conferences and various hackathons across the province to gain exposure for the branch.

Technical Skills

Programming Languages Python · C/C++ · Javascript · HTML · CSS · MATLAB

Web Development Node.js · React.js · Django · Flask · MongoDB

Machine Learning TensorFlow · Keras · Scikit-learn · MatPlotLib · Numpy

Others Technologies Git · Linux · Verilog HDL · ARM Assembly · Solidity · MS Office · Arduino