JULIA L. WANG

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SUMMARY OF QUALIFICATIONS

- Professional experience in C++ and Python for FPGA logic analyzer tools, and Flutter for mobile development.
- Project experience with convolutional neural networks (CNNs), reinforcement learning (RL), deep learning (DL), neural architecture search (NAS), generative adversarial networks (GANs), and graph neural networks (GNNs).
- Proficient in Python, C++, C, Arduino, Verilog FPGA, MATLAB, ARM Assembly, Flutter, and JavaScript. Experienced in NumPy, TensorFlow, Pandas, PyTorch, IBM Cloud, React.js, ModelSIM, APIs, CSS, and HTML.

EDUCATION

B.A.Sc. in Engineering Science (EngSci) | University of Toronto **Sept. 2018 - May 2024 (expected)**

- Rising senior in the Machine Learning (ML) and Artificial Intelligence (AI) major with a 3.70 major GPA and Minor in Engineering Business. Recipient of the 2020 Prof. Cohen and 2021 Mario Pesando Scholarships.
- Contributed to the engineering community as a Lead First Aid Responder, Electrical Engineer in the UofT Hyperloop Design Team, and Project Developer in the UofT Machine Intelligence Student Team.
- Relevant courses: AI, ML, Data Structures, Algorithms, Operating Systems, Software Engineering, Databases

EXPERIENCE

Software Engineering Intern | Intel Corporation **May 2022 – April 2023 (expected)**

- Full stack development of backend and frontend of an FPGA logic analyzer using C++ and Python for features automating matching signals and creating a clock tracing algorithm to optimize signal visibility.
- Implemented user-facing GUI enhancements in C++ from direct client requests, improving efficiency and UX.
- Collaborated as a cohort leader to host weekly events for 25+ interns, including managing intern budget.

Software Developer & Data Engineering Intern | Dataraction, Inc. **September 2020 – June 2021**

- Front-end developer for a Flutter app encouraging user feedback on videos from chosen criteria. Engineered numerous video, notification, and user models, a badge system to ensure reliability, and conducted unit testing.
- Regulated databases, ran raw SQL queries, and aggregated data using JDBC to develop an internal dashboard providing insights on user journey and growth; pitched forecasts and marketing strategy to investors.

PROJECTS

AIHacks4Good 24h Hackathon 2022 - MLH **September 2022**
Predicting Recidivism *1st Place Finalist*

- Developed a model to predict recidivism in Python by implementing NAS with a controller NN trained by RL to use the reward and a counterfactual fairness metric to tune the hyperparameters of a child feedforward NN.
- Model yielded a 3.5x improvement in counterfactual fairness without decreasing accuracy.

AI For Future Business Competition 2021 - RBC, Microsoft, Technation **January 2021 – April 2021**
DotsLogistics Solutions *2nd Place Finalist / 302*

- Spearheaded and pitched an AI logistics solution streamlining B2B and B2C relationships.
- Developed a functional prototype website using React.js and CSS, and implemented a GNN in Python.

SEEK 2019 Competition - Robotics for Space Exploration **April 2019**
Autonomous robot *1st Place Finalist*

- Innovated to create an Arduino (C++) Bluetooth-controlled robot within 6 hours which could turn, stop, drive forwards or backwards, sense obstacles, and completed an obstacle course with an autonomous challenge.