JULIA L. WANG

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EDUCATION

University of Toronto | BASc in Engineering Science – Machine Learning Major • *Expected Graduation: 2024*

- Minor in Business | CGPA: 3.68 |2020 Prof. Morris A. Cohen and 2021 Mario Pesando Scholarship
- Relevant courses: Computer Algorithms & Data Structures, Databases, Machine Learning, Optimization, AI, OS

SKILLS

- **Languages**: Python, C++ & Arduino, SQL, Verilog FPGA, C, MATLAB, ARM Assembly, R, Dart, JavaScript
- **Technical:** React.js, AutoCAD, Flutter, AWS, HTML, CSS, ModelSIM, TensorFlow, PyTorch, NumPy, Pandas, Flask, sklearn, PostgreSQL, JDBC, IBM Watson, Microsoft Office, APIs, XML, prototyping, business analysis

WORK EXPERIENCE

Software Engineering Intern | Intel Corporation • *May 2022 – Present*

- Developed backend and user-facing GUI using C++ and Python to automate matching signals for the Signal Tap Logic Analyzer, maximizing signal visibility for system-level debugging. Conducted unit and regression tests.
- Collaborated as a cohort leader to host weekly events for 25+ interns, including managing intern cohort budget.

Software Developer & Data Engineer | Dataraction • *September 2020 – June 2021*

- 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.
- Launched a real-time analytics dashboard for streamers on the streaming service using IBM Cloud and AWS.
- 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.

PROJECTS

AI to Predict Recidivism | *AIHacks4Good 24h Hackathon 2022* • **1st Place Finalist**

- Developed a model to predict recidivism by implementing neural architecture search (NAS) with a controller neural net trained by reinforcement learning (RL) in Python. Model yielded a 3.5x improvement in counterfactual fairness without decreasing accuracy while incorporating non-differentiable fairness metrics.

AI Team Lead | *AI For Business Competition 2021 - RBC, Microsoft, Technation* • **2nd Place / 302**

- Developed a business proposal and prototype using React.js, CSS, and Power BI for a 5-month competition.
- Spearheaded an AI logistics solution leveraging ML to streamline B2B and B2C relationships and transactions.

Optimizing Shoe Storage Systems | *BATA Shoe Museum's 2020 Shoe Storage Challenge*

- Incorporated iterative design relative to stakeholders, objectives, and client-given metrics to compile a design brief summarizing 10+ shoe storage solutions, converging to a Jenga-inspired drawer system.
- Constructed 3 laser cut wooden prototypes using AutoCAD to assess stability, usability, and accessibility.

Autonomous Robot | *Robotics for Space Exploration's SEEK 2019 Competition* • **2nd 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.

EXTRA-CURRICULARS

Project Developer | UofT Machine Intelligence Student Team | ECG Analysis • *Sep 2021 – May 2022*

- Developed a deep convolutional neural network (CNN) for ECG analysis to diagnose cardiovascular disease.

Electrical Engineer | UofT Hyperloop Team • *June 2019 - June 2020*

- Designed and developed prototypes for a hyperloop pod by compiling research and discussing with 6+ team members to make decisions on battery management, development, safety, and cooling mechanisms.
- Modelled battery configurations using AutoCAD and researching 10+ cooling methods.

Elected First-Year Engineering Science Representative | UofT Engineering Society • *Sep 2018-May 2019*

- Engaged in discussion with faculty and teaching staff concerning specific issues and concerns of the Engineering Science class of 260+ to enhance the learning experiences of peers.
- Facilitated weekly events hosting 20+ students promoting positivity, diversity,&inclusivity within the community.