

Education

University of Waterloo Bachelor of Applied Science in Computer Engineering 2020 – 2025

• Coursework: Data Structures & Algorithms, Systems Programming, Distributed Computing, Real-Time Operating Systems.

Centre of Excellence in Next Generation Networks Machine Learning with Python Certification Aug 2022

Skills

- **Languages:** C, C++, Java, Python, JavaScript, TypeScript, Dart, MATLAB.
- **Frameworks:** Node, Express, React, React Native, Angular, Flutter, Django, Flask.
- **Data/ML:** NumPy, Pandas, Matplotlib, Scikit-Learn, SQL, MySQL, PostgreSQL, Sequelize, MongoDB, Redis.
- **DevOps:** AWS, Azure, Firebase, Docker, Kubernetes, Selenium, Robot Framework, Grafana, Kibana, Bash, Linux, Git, Jira.

Experience

Software Engineering Intern @ German Aerospace Center Jan 2024 – Apr 2024
Stuttgart, Germany

- Engineered a Python and Flask-based backend framework that performs steady-state heat flow calculations from thousands of batch datasets, assisting researchers in assessing the cooling capacities of rail vehicles.
- Designed an intuitive user interface with React and TypeScript for efficient data uploading and storage through an SFTP server, incorporating dynamic visualizations with Matplotlib.
- Worked with researchers to develop a comprehensive real-time logging system of critical operation data for trains traveling near Berlin using OpenVPN, essential for the integration of hydrogen trains in Germany.
- Created an engaging Hannover Messe 2024 demonstration using a Raspberry Pi and 3D-printed models of mobile, hydrogen fuel cell units to showcase the future of electric vehicle charging solutions, captivating over 200,000 attendees.

Software Engineering Intern @ Cineplex Entertainment Jan 2023 – Apr 2023
Toronto, Canada

- Spearheaded the company-wide migration to automated testing with Python and Robot Framework, ensuring stringent quality standards for software services and introducing end-to-end testing functionality.
- Strengthened security posture by implementing REST API security with OpenID Connect and OAuth 2.0.

Software Engineering Intern @ Tehama Technologies May 2022 – Aug 2022
Ottawa, Canada

- Designed a logging and metrics pipeline using Elasticsearch, Fluentd, and Kibana to enable comprehensive monitoring of VPNs and organize millions of logs into a unified database.
- Engineered a streamlined Docker container enabling the setup and execution of the complete development environment with a single command, reducing the onboarding timeframe by 95%.

Software Engineering Intern @ KitchenMate Sep 2021 – Dec 2021
Toronto, Canada

- Implemented real-time payment authentication within the kiosk's point-of-sale ecosystem with Stripe's API.
- Automated the seamless cooking process for the Smart Cooker using RESTful APIs in TypeScript to perform QR code dish recognition, and retrieval and processing of cooking instructions from the backend database.

Software Engineering Intern @ Watorace Jan 2021 – Apr 2021
Waterloo, Canada

- Built a multi-agent path planner for autonomous race cars in C++ and ROS using real-time data from LiDAR, radar, and camera sensors, as well as wheel encoders and GPS, decreasing collision rates by over 50%.
- Designed a racing line optimizer in MATLAB using track cloning, point mapping, automated lap timing, and boundary and collision detection for real-time racing line modeling and calibration.

Interests

- Soccer, Basketball, Hiking, Documentaries, Learning Languages, Cooking, Travel.