Keyon Jerome

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Skills

Languages:	C++, Python, C, CMake, Java, Bash, Dart, HTML, CSS, JavaScript, SQL
Frameworks:	ROS, Flutter, Angular, OpenCV, Node.js, Flask
Tools:	Linux, Git, Android

Work Experience

BlackBerry — Kanata, ON
Self-Driving Sensor Software Developer — Jan 2022 - Present

- Developing Autonomous Valet Parking technology with ROS2 on QNX embedded operating systems.
- Translating BlackBerry's self-driving framework in C++ to build on QNX.
- Developed QNX-specific CMake macros for building and debugging ROS2 packages.

Ford Motor Company — Waterloo, ON
Media & USB Infotainment Developer — May 2021 - Aug 2021

- Developed logic infrastructure in Kotlin and Java for an Android embedded system environment.
- Synchronized song and media playback speeds across USB media playback app, connecting vendor implementation with Ford tools.
- Interfaced with Android debugging tools (ADB) to create media playback tools and functionality for vehicle when USB devices are plugged in.

STEP Software — London, ON
Software Developer — Jun 2019 - Jun 2019

- Developed a note-taking web app using Angular, PHP, and MySQL.
- Implemented a phpMyAdmin server backend, using Agile workflow and database fundamentals.

Projects

Robotics Computer Vision - BOS Raspberry Pi Contest Winner
OpenCV, Python

- Implemented real-time object detection using OpenCV (Python) on a Raspberry Pi with a Tensorflow prediction model.
- Created PID protocols for robot to autonomously drive to game objects.
- Generated a machine-learning model using Microsoft's CustomVision.AI.

ROS2 Smart Home
ROS2 Galactic, C++, pigpio, Node.js

- Created 24V LED strip controller using logic-level MOSFETs running on a Raspberry Pi with ROS2 in C++.
- Implemented pigpio C library for applying pulse-width modulation for accurately controlling LED strip color.
- Created Node.js web app for automatically publishing color changes to ROS2 nodes via rosbridge.js.

Extracurricular Experience

UW Robotics — Waterloo, ON
Software Team Member — Jan 2022 - Present

- Developed ROS2 C++ robot utilities package for consolidating transmission, joint, and actuator data.

EngHack — Waterloo, ON
Fullstack Developer, Workshop Lead — Feb 2021 - Jun 2021

- Designed mentorship Discord bot and ticketing system using Node.js running on Google Cloud for hackers and mentors to connect.
- Co-hosted Intro to Git and GitHub workshop on Hopin, introducing 60+ students to version control systems.

Education

University of Waterloo — Waterloo, ON
BASc., Mechatronics Engineering — Sep 2020 - Apr 2025

- **Relevant Coursework:** Data Structures and Algorithms (C++), Digital Computation (C++)
- **Extracurriculars:** UW Robotics, Engineering Society, 15 hackathons