Zulaikha Zakiullah

zulaikha.me
zzakiull@uwaterloo.ca
/zzakiullah
/zulaikha-zakiullah

4A Electrical Engineering

Skills

Languages C/C++, Python, Java, JavaScript, TypeScript, C#, R, Ruby, Go, MATLAB, ARM Assembly, VHDL

Hardware STM32F-, Arduino, OpenOCD, FreeRTOS, LTspice, PSIM, Altium Designer, Proteus, Quartus

Other Git, Linux/Unix, Docker, Android Studio, AWS, Jenkins, Vagrant, Pandas, CAN

Experience

Onsemi
Jan 2023 – Present

Hardware and Systems Developer — *Waterloo, ON*

- Designed a proof of concept control module to be used in the fabrication laboratory to replace current setup with one with a greater temperature range tolerance
- Validated schematics presented by team and suggested changes to make more reliable
- Extended custom hardware abstraction layer (HAL) libraries to include other feature support, including PWM

Waterloo Formula Electric
Sep 2019 – Present

Firmware Co-Lead — *Waterloo, ON*

- Assisted first-year students in team onboarding and with a general introduction to starting embedded development
- Redesigned vehicle dashboard using C++ and Qt library to read messages from CAN bus and display relevant information to driver, improving overall dashboard performance by over 200%
- Implemented linter in vehicle codebase using Cppcheck to ensure all vehicle code complies with MISRA C standard

Ford Motor Company
Jan 2021 – Apr 2021

Software Developer — *Waterloo, ON*

- Developed an API to enable controls on infotainment system based on vehicle's geographic location
- Integrated runtime resource overlay packages in Android OS for infotainment system to load specific app restrictions depending on its location, to ensure all vehicles adhere to driving standards set per country

Ford Motor Company
May 2020 – Aug 2020

Test Automation Developer — *Waterloo, ON*

- Designed an automated job to run monthly using Python and Jenkins DSL to delete all unused workspaces in Jenkins machines, speeding up the testing pipeline
- Created an API implementing the façade design pattern to abstract away unnecessary implementation details, allowing for easier and faster usage

Projects

Arduino Car
zzakiullah/car

- Designed simple wired remote-controlled car using Arduino microcontroller as a base

Education

University of Waterloo
2019 – 2024 (Expected)

Candidate for BASc in Electrical Engineering – CAV: 90% — *Waterloo, ON*

- **Relevant Courses:** Data Structures and Algorithms (C++), Analog Control Systems, Digital Signal Processing, Power Systems and Smart Grids, Engineering Biology