

Ruihang (Ray) Wu

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HIGHLIGHT

Proficient in Simulink and Stateflow software development for NXP microprocessor based automotive ECU
Worked with low level communication protocol such as CAN, LIN, SPI, I2C, BLE GATT profiles
Experience working with hardware schematic and performing board level reworks to troubleshoot problems
Familiar with automotive tools such as Vector CANalyzer, CANoe, built CAN networks for testing of ECU software

EDUCATION

Master of Science, Electrical Engineering, Wayne State University Expected Dec 2024
Bachelor of Science, Electrical Engineering, McGill University

WORK EXPERIENCE

Product Engineer *Magna Seating* Jun 2020-Present

- Main software developer using Simulink to develop control algorithms for powered automotive seating
- Analyzed software requirements to develop software procedure
- Used a modular approach to organize software functionality, allowing clear layout for debugging
- Built test harness to validate individual software block's function
- Led transition from C based toolchain to Simulink model-based toolchain for software development
- Supported property demos for customer as well as auto shows

Research Assistant *Wayne State University* Jan 2020-Jun 2020

- Aided in transferring past seat controller module functionality to a Simulink based toolchain
- Replicated functionality using Simulink and Stateflow charts
- Documented new development environment and software development process

Customer Support Specialist *Sutherland Global Services* Jun -Dec2019

Student Support Specialist *OneClass* Jan 2018-Jun 2019

R&D Hardware Test Intern *Reflex Photonics* Jan 2015-Aug 2015

- Tested prototype optical transceivers to meet design specifications
- Developed Python scripts to communicate with test equipment and record test data
- Set up test stations with optical attenuators, signal analyzers, oscilloscope, and other testing equipment
- Reviewed test results on faulty transceivers and updated supervisors with test results

PROJECTS

Seating Demo Property

- Supported development of small support modules with Bluetooth and phone app for marketing team
- Supported events and demos from software and electronics side
- Root caused demo performance issue and performed fixes to ensure demo property functionality
- Saw how people interacted with the seat and software and implemented lessons learned

Sudoku Image Recognition Solver

- Created a python program that is able to recognize and solve a sudoku puzzle using a camera
- Used OpenCV and NumPy library for image processing and contour finding functions
- Trained a machine learning classifier using scikit-learn from gathered data for number recognition

IoT Pipeline Simulation

- Built a system in C that explored the interaction of embedded peripherals and sensors with cloud-enabled services
- Involved data transmission between several devices and services, which is one of the main hallmarks of IoT design
- Designed user interfaces for Android application to select data to be sent to AWS Lambda
- Implemented different communication protocols such as UART, BLE, and HTTP GET and POST

HOBBIES

Coding, soldering, embedded projects
Robotics
Hackathons