Matthew Ruigrok

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EDUCATION

McMaster University, Hamilton, ON
Bachelor of Engineering (B. Eng), Mechatronics GPA: 4.0
Graduated - 2022

RELEVANT COURSES

• Software Development • Data Structures & Algorithms • Operating Systems
• Robotics • Predictive & Intelligent Control • Embedded Systems

PROJECTS

Cloud Based Home Automation System
• Worked in a small team alongside an industrial sponsor to develop a smart vent and blind actuation system in order to reduce household energy consumption

Smart Response
• Built an app using Python, React Native, and Node.js to notify first responders of potentially life-threatening events within seconds using live data from city nodes

Pacemaker Software Project
• Programmed an NXP microcontroller to deliver rate-adaptive pulses using Matlab and Simulink and helped build a supporting GUI using Node.js

GraphDB
• Basic database-like program built using Java that allows the user to create, search, save, and reproduce graphs, which contain unique nodes and relationships

EXPERIENCE

Undergraduate Researcher, McMaster University Sept 2021 - Jan 2022
• Designed and prototyped an over-the-air update pipeline that upgrades deep learning models deployed to client vehicles using Node.js, Matlab, and Simulink

SDE Intern, AWS May 2021 - Sept 2021
• Created a public-facing website using TypeScript and React and deployed it to AWS services such as S3, CloudFront, and Route53 with AWS CDK

Controls Engineering Intern, Stellantis June 2020 - Aug 2020
• Developed a coolant flow model and implemented a pump controller for a specific platform of electric vehicles using GT Suite, Matlab, and Simulink

Maintenance Technician, MB Animal Health June 2016 - Sept 2019
• Hands-on experience wiring control devices into PLC cabinets such as 3-phase motor contactors, pneumatic solenoids, variable speed drives, and level indicators

TECHNICAL SKILLS

Languages: C/C++, Python, Matlab, TypeScript, Java, SQL
Libraries and Tools: Git, numpy, openCV, sklearn, tensorflow, Eigen, React
Other: Simulink, Inventor, Cura, LabView, GT Suite, AVL

ADDITIONAL ACTIVITIES

• Deltahacks VI • Intramural Floorball • Dunnville United Soccer Club
• Hockey • Woodworking • Metal Fabrication • Car Enthusiast

AWARDS

University Senate Scholarship 2021
Voiko Loukanov Engineering Scholarship 2020
Dean's Honour List 2019, 2020, 2021
Governor General's Academic Medal 2016