Hritheekka Chinnakonda

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Education

Sept 2020 – Apr 2024: McMaster University • Hamilton, Ontario

Bachelor of Electrical Engineering

Engineering Experience

May 2022 – Aug 2022: Co-op • Web Programmer • Handi-Care International
Co-op at a leading Canadian charity organization (**handicareintl.org**) empowering children with disabilities and rehabilitation for spinal cord injury.
- Involved in an international exchange (**Amar Seva Sangam**, India), visited the prosthetic engineering division, interviewed and interacted with spinal cord injury patient and physiotherapists
- Website hosting and redesign using WordPress content management system for static page creation, dynamic page creation using **PHP** and **SQL** from database
- Overall redesign increased website traffic by 140%

May 2021 – Aug 2021: Co-op • PT Analyst • Hoffmann-La Roche
Co-op at a Swiss multinational healthcare company (**roche.com**) that operates worldwide under two divisions: Pharmaceuticals and Diagnostics.
- At Roche Diagnostics division, under the management of a Senior Technical Manager Global Annual Product Quality Review, I learned about the digital solutions developed for laboratories, physicians and patients
- Designed division/project websites using **Google Sites, HTML, CSS**, using **Tableau** for data analysis
- Worked under **Scrum** team, learned **Agile** delivery and management, and organized/led bi-weekly team meetings

Technical Skills

Languages / Technologies:
- Web development, WordPress, HTML5, CSS3, PHP, SQL
- Python, Java, C/C++, Git/GitHub, Assembly, MATLAB, Linux OS, ROS, WaveForms, Keil uVision, Quartus II, Autodesk Inventor, LTSpice

Engineering Projects

Jan 2023 – Present: Autonomous Electrified Vehicle (AEV) System Integration Project
- Developing and integrating software and hardware modules for a small-scale (1/10th) RC vehicle platform
- Exploring localization and mapping (SLAM) in autonomous systems, using **Linux OS**, **C/C++**, **Python**, **Matlab/Simulink** and embedded systems
- **Robot Operating Software (ROS)** to develop a real-time control system on Nvidia Jetson Nano AI embedded computer

Sept 2022 – Present: Member • MACtion Potential• McMaster University
- A NeuroTechX and McMaster University affiliated club focused on neurotechnology and creating innovative solutions to complex problems
- Designing a device and building required circuitry using **PCB's** and simulations with **LTSpice** to aid with nicotine withdrawal

Jan 2022 – May 2022: Infrastructure for Self-Driving Vehicles
- Redesigned existing 4-way traffic intersections to accommodate self-driving vehicles with insightful analysis regarding design efficiency, safety and adaptability with strong consideration of **PERSEID** layers
- Traffic simulations created using **Python** along with terminal visuals of the intersection models

Jan 2021 – May 2021: Sorting and Recycling System for Containers
- Designed a system consisting of simulated parts (**Autodesk Inventor**) and software components (**Python**) to identify, sort and recycle containers
- Data collected from a virtual environment QLabs (Qlabs Virtual QArm), identified contains allowing for seamless disposal
- Led and organized team meetings in order to meet progress report and milestone deadlines using **Gantt charts**

Oct 2020 – Mar 2021: Competitor • Business + Higher Education Roundtable Canada Comeback Challenge
- Created an application (My CAD – "My Canadian Doctor") to solve the absence of direct healthcare access due to COVID-19
- The app design, and prototype programming (**Python**) were presented as a video submission
- Top 10 finalist out of 150 team's total