Hritheekka Chinnakonda

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Education

Sept 2020 – Apr 2025: McMaster University • Hamilton, Ontario

Bachelor of Electrical Engineering Co-op Program

Internship Experience

Co-op • IT Systems Administrator Intern • Blanc Labs ***May 2023 – Aug 2023***

Toronto-based technology company driving the financial future through innovative solutions across diverse sectors.

- Successfully supported the **SOC 2 Type 2** auditing for cloud-based applications (**JumpCloud**, **Bitdefender**, **Office 365**)
- Provisioned and conducted testing for **Azure** and **AWS** services and resources
- Tested and designed a company-wide **Microsoft Power Apps** application to conduct quarterly performance reviews

Co-op • Pharma Technical Analyst • Hoffmann-La Roche ***May 2021 – Aug 2021***

Swiss multinational healthcare company operating worldwide under two divisions: Pharmaceuticals and Diagnostics.

- Assisted in implementing digital solutions developed for laboratories, physicians and patients
- Successfully designed division webpages (**Google Sites, HTML, CSS)**, sharing digital solution information within the company
- Followed Agile sprint management (**SCRUM)**, led and organized bi-weekly team meetings, used **Tableau** for data analysis

Skills

Technical Skills / Software:

- Web development, WordPress, HTML5, CSS3, PHP, SQL, Azure, AWS, Jira, Office 365, Microsoft Power Apps, Power BI
- Python, Java, C/C++, Git/GitHub, MATLAB, Linux OS, ROS, AutoCAD, LTSpice, Verilog, R, Raspberry Pi, Tableau, PSpice, LLMs, TensorFlow, Prompt Engineering

Strengths:

- Interpersonal Skills, Curious, Passionate, Creative, Teamwork
- Project Management, Critical Thinking, Adaptability, Leadership

Certifications:

- Microsoft Certified: Azure Fundamentals

Engineering Projects

Dec 2023 - Present: Real-Time ASL (American Sign Language) to Speech Translator

- Developing a portable ASL-to-speech translator that seamlessly translates ASL into audible speech in near-real-time
- Building an ASL Video-to-Text Machine Learning (ML) Algorithm based utilizing upon open-source models
- Develop a custom live-streaming API to integrate the ASL Video-to-Text ML Algorithm with the **11Labs platform**

Nov 2023: Neural Network Classifier with Two Hidden Layers

- Developed a **neural network** classifier with two hidden layers to distinguish between authentic forged banknotes.
- Divided data into training, validation, and test, using various activation functions for output and hidden units
- Employed gradient descent with early stopping to select weights based on the lowest validation cross-entropy loss

Nov 2023: EOG-Based Bio-Instrumentation Amplifier for Human-Computer Interface Development

- Developed and designed a multistage bioinstrumentation amplifier/filter system EOG signals using a **modular PCB**
- Conducted EOG signal acquisition using **MATLAB** and identified blink artifacts
- Demonstrated proficiency in controlling computer tasks via EOG-driven mouse navigation

Jan 2023 – April 2023: Autonomous Electrified Vehicle (AEV) System Integration Project

- Developed and integrated software and hardware modules for a small-scale ($1/10^{th}$) RC vehicle platform
- Explored SLAM in autonomous systems, using **Linux OS**, **C/C++**, **Python**, **Simulink** and embedded systems
- **Robot Operating Software (ROS)** to develop a real-time control system on Nvidia Jetson Nano AI embedded computer

Jan 2022 – May 2022: Spatial Mapping Using Time-Of-Flight Sensor

- Designed an embedded spatial measurement system using Time of Flight sensor, a stepper motor and a microprocessor board
- Graphically displayed measurement data as a 3D model using **C/Assembler**

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
- Developed the app design and prototype programming (**Python**)
- Top 10 finalist out of 150 teams