Nicholas Allison

Electrical Engineering and Computer Science Student

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nickrallison.github.io https://github.com/nickrallison

PROFILE

Hi, I'm Nick Allison. I'm an Electrical Engineering and Computer Science student. I am a lifelong learner and I enjoy solving complex problems.

EDUCATION

Bsc. Electrical Engineering, Computer Science, GPA: 3.97 09/2020 – present
University of Calgary Calgary, Canada
Relevant Coursework: Data structures and Algorithms, Computer Organization, Embedded Systems, Control Systems

PROFESSIONAL EXPERIENCE

Robotics Engineering Intern 05/2022 – 08/2022
Maparobo Calgary, Canada
As an intern in a start-up company developing a landscaping robot, I was given a lot of different work in a lot of different categories. I developed firmware, helped plan an electronics system and created a neural network to classify objects. I really enjoy the process of self-directed learning and helping however I can.

Tutor 01/2021 – present
University of Calgary - Peer Assisted Study Sessions Calgary, Canada
As a PASS leader, I help younger university students in their studies by facilitating practice sessions weekly as well as midterm and final preparation.

PROJECTS

ILS - Second Year Project
In my second year, all of my courses were tied together alongside a semester-long project where we work alongside teammates to develop technical and teamwork skills. Using a microcontroller. We built a system that can recognize and respond to morse code.

Wordle Solver
Built a system to most efficiently solve the internet game "Wordle". It searches through each word in its internal word list and determines which one would on average reduce the internal list the most.

Root Finding Algorithm
I developed an algorithm to find all roots, real and imaginary, of an arbitrary degree polynomial and implemented it in C++. It creates a 2D array of points and iterates them via the Newton method. It then uses a limit test and cluster detection to identify the roots.

Node Voltage Calculator
I developed a calculator to solve circuits. I all of the equations, and solve the system of equations to find the voltage at each point.

SKILLS

Languages:
C, C++, Python, MATLAB, Rust.

Libraries:
Eigen, Tensorflow

Tools and Technologies
Git, ROS, LTSpice

Professional Skills:
Self-directed Learning, Problem Solving, Communication