Carl Anderson

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Education

University of Minnesota Twin Cities, Minneapolis MN

Master of Science in Electrical and Computer Engineering   Expected May 2023
    Admitted via 5-year integrated degree program

Bachelor of Computer Engineering   Expected December 2022
    GPA: 3.75/4.00
    Dean's List Fall 2019 – Fall 2020, IEEE HKN Member
    Related Coursework: Digital Design, Algorithms and Data Structures, VLSI Digital Signal Processing Systems

Skills

Software: Altium, Eagle, Git, Vivado, MATLAB, Jira, MPLABX, LTspice, VSCode, VIM, Synopsys Design Compiler

Programming Languages: Python, C++, C, Java, Verilog, SystemVerilog, Bash, TCL

Operating Systems: Windows 10, Linux, MacOS

Work Experience

Undergraduate Research Assistant, University of Minnesota   August 2021 – Present
Professor Keshab Parhi, Department of Electrical and Computer Engineering
- Designing physically unclonable functions in verilog to determine utility in low power hardware authentication
- Funding provided via Undergraduate Research Opportunities Program

Firmware Engineering Intern, Hewlett Packard Enterprise, Bloomington MN   May 2021 – December 2021
- Developing peripheral interfaces for QEMU to allow simulation of network device controllers
- Wrote firmware in C on a FreeRTOS system for Slingshot high performance network devices
- Developed evaluation software in Python for Shasta architecture systems to track performance over time

Undergraduate Lab Teaching Assistant, University of Minnesota ECE Department   January 2021 – May 2021
- Helped students in classroom environment work on microcontrollers labs and final project

Peer Tutor, University of Minnesota SMART Learning Commons   August 2020 – May 2021
- Tutored students in introductory electrical engineering, calculus, physics, Python, and Java

Activities

Avionics Lead, University of Minnesota Rocket Team   Elected May 2021
- Organize integration of active controls and extended Kalman filter into flight computer architecture
- Managing team in design, construction, and iteration upon reusable universal flight computer

Avionics Hardware Lead, University of Minnesota Rocket Team   August 2019 – Present
- Designed schematic and PCB for on-board flight computer cards in Altium
- Wrote firmware for serial communication between microcontroller and sensors in C

Member, IEEE Student Branch, University of Minnesota   August 2019 – Present
- Helped design chapter website in HTML and CSS

Captain, FIRST Robotics Team 3205, Concord Carlisle High School   May 2018 – May 2019
- Lead team in 6-week competition to design, build, and program 120-lb robot

Volunteer Experience

3D Printing Volunteer, Earl E. Bakken Medical Device Center   October 2019 – March 2020
- Repaired prototyping lab equipment, aided with grad student projects, held office hours to help center users