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EDUCATION

Cornell University **Ithaca, NY**

B.S. in Electrical and Computer Engineering, B.S. in Computer Science (GPA - 3.8) *Expected Graduation: May 2024*

Relevant Coursework

Introduction to Analysis of Algorithms
Digital Logic & Computer Organization
Digital System Design Using Microcontrollers
Data Structures & Functional Programming

Skills

Programming Languages: Rust, Java, Python, C/C++

Software: Linux, LTspice, KiCAD, Mentor Designer/Layout, Quartus

Hardware: Raspberry Pi, Arduino, FPGA Boards, Verilog

EXPERIENCE

SpaceX **Hawthorne, CA**

Starlink Engineering Intern *Jan 2022 - Aug 2022*

- Designed a dev PCBA to test various potential fixes for acoustic noise from user terminals
- Anchored User Terminal Power Budget over temperature and operating mode by automating thermal chamber data collection through SCPI commands, informing thermal team of shortcomings and improving field predictions
- Tested and qualified alternative integrated circuits for Business User Terminals, preventing a parts shortage
- Automated an assembly line station through mechanical design and PLC TwinCAT software, tripling its speed and preventing a production bottleneck

Cornell University Unmanned Air Systems **Ithaca, NY**

Electrical Team Member *Fall 2022 - Present*

- Designed a PCB using an ESP32-S2 microcontroller to interface with a camera over a DVP or USB protocol and save footage to an SD card.

Cornell University - Engineering Learning Initiatives **Ithaca, NY**

Tutor - Statics and Mechanics of Solids & Multivariable Calculus *Fall 2021*

- Met with students in one-on-one sessions, assisting their understanding of course material, and promoting their development of critical thinking and problem solving skills

Cornell University - Statics and Mechanics of Solids **Ithaca, NY**

Teaching Assistant *Spring 2021*

- Hosted two lectures, preparing over 70 students for upcoming exams by solving practice problems with them
- Led weekly office hours for 3-5 students, assisting them in understanding concepts and applications taught in lectures

PROJECTS

Chess AI *Summer 2021*

- Developed a UCI Chess AI from scratch in Rust using a minimax algorithm with variable depth and time control.
- Set up interaction with lichess.com's API, allowing the AI to play against other bots and humans, earning an Elo rating of 1700, making it stronger than 70% human players on the website.

Servo Controller *Summer 2021*

- Modified servos to provide an analog feedback signal of their position by accessing the potentiometer within it
- Designed and created an Op-Amp circuit which generates a pulse width modulation (PWM) signal, controlling the position of a servo to match that of another servo by implementing an analog feedback loop to adjust the signal

Automatic Plant Waterer *Summer 2020*

- Designed and built 3D-Printed automatic plant watering machine with Fusion 360, housing a mint plant and a water supply
- Implemented an Arduino to detect when the soil is too dry and use a peristaltic pump to water the plant when necessary

3D Printed RC Hovercraft *Fall 2019*

- Designed and built a fully 3D-Printed radio controlled (RC) Hovercraft with Fusion 360, using custom-designed 3D-Printed impellers.