Vin Shin

shin.vin linkedin.com/in/vinshin623 vinshin623@gmail.com

Education

University of California, Santa Barbara June 2028
B.S. Electrical Engineering *GPA: 4.00*

Coursework

Courses: Mechanics, Electricity & Magnetism, Linear Algebra, Differential Equations, Vector Calculus, Fundamentals of Logic Design, Introduction to Arduino, Problem Solving with Computers

Technical Skills

Technologies: CAD (Inventor, SolidWorks, Fusion), Circuit Design (KiCAD, Fusion), Version control (Git), STM32
Tools: 3D Printing (Prusaslicer, Bambu Studio), CNC (Tormach), Laser-Cutting (UCP)
Languages: Python, C/C++, Java, MATLAB, LaTeX
Libraries: pandas, NumPy, SciPy, Matplotlib

Professional Experience

Engineering Intern | **Arcadia Tractor Corporation** | San Jose, CA Nov. 2022 - Jan. 2024

- Improved ball-collection performance by an estimated 20% by designing a compact ball collection hopper with Fusion.
- Developed an automatic recharging circuit independent of tractor communication, allowing full autonomy utilizing KiCAD, Arduino, and linear motor actuators.
- Prototyped ball-deflectors, reducing damage-costs subsequent tractor operation with Fusion and design iteration.
- Monitored autonomous behaviors and managed data collection of prototype tractor.

Lead PCB Designer | **Nize Systems** | Pleasanton, CA Feb. 2023 - Apr. 2024

- Designed and constructed a bridge PCB connector between RFID RC522 and Arduino Nano, decreasing production times by an estimated 50% utilizing KiCAD.
- Designed scanner PCBs utilizing ESP-32 and ATmega architectures, RGB lighting, RFID & NFC modules.
- Consulted for engineering interns planning microcontroller system designs.

Projects

Telecommunications Sensor Nodes | *UCSB Gaucho Racing* Dec. 2024

- Design and manufacture sensor network that captures data metrics of GR25, Gaucho Racing's electric competition car for Formula SAE.
- Designed 5 unique sensor PCB and enclosure through Fusion and SolidWorks.

CV Classification Robot Frog | *UCSB ECE 5* Nov. 2024

- Designed a robotic frog with similar leg jumping mechanics of a typical frog.
- Implemented IoT publishing to run an OpenCV inference model on local machine given an ESP32Cam broadcast.
- Identifies faces through object detection and interacts with the environment accordingly.