Sean Michael Manger

Watsonville, CA ✉ seanmanger22@gmail.com 🌐 Personal Site 📞 831-269-1918 in Sean Manger ⌗ SeanM25

Engineering Projects

- "Watch Your Step" platformer game with Verilog and Basys 3 FPGA
- Power Line Inspection with UAVs for UCSC
- Flight Sim in Python
- Simulated Toaster Oven using C and STM-32 Nucleo MCU
- Ground Bouce PCB

Please See my Personal Website linked above for further detail

Technical Skills and Licenses

- **Programming Languages/Tools:** Python, Embedded C and C++, Verilog HDL, RISC-V Assembly, TCL, HTML/CSS, LaTeX, Linux
- **Engineering Software:** Vivado, OnShape CAD, MATLAB, Simulink, Control Systems Toolbox, Cadence PSpice, Altium Designer
- **Licenses:** FAA sUAS License
- **Misc Skills:** Soldering, Test Equipment, Sewing, Power and Hand Tools

Education

University of California, Santa Cruz   Expected: Mar. 2026

Pursuing BS in Electrical Engineering

Enrolling in 4+1 Masters Program in Electrical Engineering after completing Bachelor Degree

- **Current GPA:** 3.61
- **Relevent Coursework:** Feedback Control Systems, UAV Theory and Controls, Analog Electronics, Logic Design, High-Speed Digital Design, Signals and Systems, Properties of Materials, Embedded C Programming
- **Dean's List Fall 2024**

Cabrillo College, Aptos, CA   Aug. 2019 - Dec. 2023

AS Computer Science, AS Physics, AS Mathematics, AA Liberal Arts and Science

- **Cumulative GPA:** 3.75
- All degrees received with **High Honors** or **Honors** distinction

Experience

Hardware Systems Collective Lab Engineer and Undergraduate Researcher   Santa Cruz, CA

University of California   Jul. 2025 – Present

- Working with Prof. Dustin Richmond researching cybersecurity vulnerabilities using FPGAs
- Successfully implemented and tested a time-to-digital converter design on a ZUBoard 1CG FPGA
- For a senior thesis, I am characterizing the behavior of our time-to-digital converter on AMD Ultrascale+ architecture I change PLL conditions and gather binary hamming weight data from our time-to-digital converter. This hamming data is then plotted vs. parameters of interest to the lab.

Baskin Engineering Course Reader   Santa Cruz, CA

University of California   Sept. 2024 – Present

- Course Reader for **Logic Design**, **Intro to Electronic Circuits**, **Properties of Materials**
- Grade Homework, Midterms, and Final Exams as needed

Physics Learning Center and STEM Center Tutor   Aptos, CA

Cabrillo College   Jan. 2022 – Dec. 2023

- I assisted students with any Physics or other STEM subject related questions
- I checked off weekly conceptual Physics quizzes

Hobbies and Interests

- **Technical Interests:** Controls, Embedded Systems, Sensors, Robotics, Logic Design, Hardware, Software, Aircraft
- **Personal Hobbies:** Jogging, Reading, Sewing, Fishing

Languages

Russian	**Elementary**
Spanish	**Limited**