

# Sean Michael Manger

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## Engineering Projects

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- “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

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- **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

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<b>University of California, Santa Cruz</b> Pursuing BS in Electrical Engineering	Expected: Mar. 2026
◦ <b>Current GPA:</b> 3.61	
◦ <b>Relevent Coursework:</b> Feedback Control Systems, UAV Theory and Controls, Analog Electronics, Logic Design, High-Speed Digital Design, Signals and Systems, Properties of Materials, Embedded C Programming	
◦ <b>Dean’s List Fall 2024</b>	
<b>Cabrillo College, Aptos, CA</b> AS Computer Science, AS Physics, AS Mathematics, AA Liberal Arts and Science	Aug. 2019 - Dec. 2023
◦ <b>Cumulative GPA:</b> 3.75	
◦ All degrees received with <b>High Honors or Honors</b> distinction	

## Experience

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<b>Hardware Systems Collective Lab Engineer and Undergraduate Researcher</b> University of California	Santa Cruz, CA 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 under different conditions	
<b>Baskin Engineering Course Reader</b> University of California	Santa Cruz, CA Sept. 2024 – Present
◦ Course Reader for <b>Logic Design, Intro to Electronic Circuits, Properties of Materials</b>	
◦ Grade Homework, Midterms, and Final Exams as needed	
<b>Physics Learning Center and STEM Center Tutor</b> Cabrillo College	Aptos, CA 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

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

## Languages

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Russian	Elementary Level
Spanish	Limited Working Level