

Kevin Woodman

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EDUCATION

California Polytechnic State University, San Luis Obispo (Cal Poly) March 2026
Bachelor of Science in **Computer Science**,
Minor in **Mathematics**, Senior standing, GPA: 3.97

Relevant Coursework: Distributed Computing (Graduate Level), Autonomous Mobile Robots, Theory of Computation, Programming Languages, Design and Analysis of Algorithms, Linear Analysis (1 & 2), Systems Programming

SKILLS

Programming Languages: C, Java, Python, GoLang, Racket, HTML, CSS, Javascript

Software Tools: ROS2, IsaacSim, React, REST, MPI, OpenMP, Git, TensorFlow, Linux

WORK EXPERIENCE

Space Software Intern - iMETALX Summer 2024

- Developed a closed loop synthetic dataset creation tool of cameras on-board RPO orbits for use in training reinforcement learning models using IsaacSim
- Used ROS2 for HITL testing with synthetic data in place of a camera feed and for feeding GNC back into the simulation.
- Created custom real-time orbit visualization software to verify the efficacy of our control algorithms
- Demonstrated the viability and applicability of the tools directly to the DoD customer

Software Co-Lead - Cal Poly CubeSat Laboratory 2023 - Present

- Led 9 student software engineers on developing flight software for Small Satellites
- Focus on increasing documentation and knowledge transfer

PROGRAMMING PROJECTS

SAL-E - Cal Poly CubeSat Laboratory 2023 - Present

- Led the software team in updating legacy flight software
- Focused on camera and communication systems
- 3U CubeSat (Small Satellite)
- Expected to Launch Q3 2025 in coordination with Maverick Space Systems

RAFT - Distributed Computing 2024

- A leader-election algorithm for distributed computing
- Written in Go-Lang with a gossip algorithm implementation I made
- Fault tolerant for both node and leader failure

Barn2Robotics - First Robotics 2019 - 2022

- Led the Systems Team (Software and Electronics)
- Wrote vision processing protocols using Photon Vision and OpenCV
- Implemented PID open control loop systems for kinematics
- Developed voltage regulation software for brownout protection
- Designed automatic power and angle algorithms based on distance to target
- Created a custom autonomous control framework for rapid experimentation