ALEXANDER BLOOMER

(424)-327-7455 | alexbloomer@gmail.com

alexbloomer.github.io/ | github.com/alexbloomer

Computer Science student at Cal Poly with a strong passion for software engineering, robotics, and the interaction between humans and technology. Experienced in research and industry, seeking opportunities to apply technical skills to practical applications.

EDUCATION

Bachelor of Science in Computer Science
California Polytechnic State University, San Luis Obispo (Cal Poly)
EXPECTED MAY 2028
- GPA: 3.862 | Dean's List (3/3 quarters)
- Relevant Coursework: Project-Based OOP (Java), Systems Programming (Bash, C), Computer Organization (Assembly)

SKILLS

- **Programming Languages:** Python, Java, C++, JavaScript, C#, C, RISC-V Assembly
- **Software Tools:** Git/GitHub, VScode, IntelliJ, Docker, Bash, WSL, MQTT, JSON,
- **Web Development:** HTML/CSS, Django, Flask

EXPERIENCE

Undergraduate Researcher | Cal Poly | San Luis Obispo, CA
JUN 2025 – PRESENT
- Developed real-time robotic control system to move UFactory xArm and UR3e arms with Meta Quest VR hand tracking
- Integrated MQTT pose streaming from the Quest to control robot movement
- Designed smooth Cartesian velocity and position control to ensure smooth and accurate responses

Software Engineering Intern | The Boeing Company | El Segundo, CA
JUN 2023 – AUG 2023
- Built pipeline using Docker containers to ensure safety and security in code deployments
- Collaborated with engineers to troubleshoot and optimize the pipeline
- Awarded AI innovation Award for a team project presenting an innovative AI strategy

Member | Cal Poly Robotics Club | San Luis Obispo, CA
AUG 2024 – PRESENT
- Designed and developed a Django-based website to remotely control a robotic boat
- Used agile development process to achieve goals efficiently

Programmer/Lead Technician/Co-Driver | Beach Cities Robotics | Redondo Beach, CA
AUG 2020 – JUN 2024
- Programmed competition robots in Java to do tasks autonomously and teleoperated
- Led setup and troubleshooting of robot as lead technician
- As co-driver, won regional competition and World Championship Newton division; reached World Championship finals

Code Coach | The Coder School | Redondo Beach, CA
MAR 2023 – JAN 2024
- Taught students from 6 to 18 languages and frameworks, including Python, JavaScript, C#, Java, C++, HTML/CSS, and Unity
- Led coding camps and group sessions of up to fifteen students on topics such as Scratch, robotics, and animation

PROJECTS

Baseball Simulator
JUN 2025 – PRESENT
- Built baseball simulator using probabilities based on real MLB stats using Flask web interface
- Designed interactive UI and deployed site using render: https://baseball-simulator.onrender.com/ (will take a minute to run)

Polyratings Extension
JULY 2025 – PRESENT
- Built and extension to integrate Cal Poly's professor review platform into class selection
- Implemented real-time data fetching and displayed data cleanly using JavaScript, HTML, and CSS