

David Glover

Santa Cruz, CA

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EDUCATION

University of California, Santa Cruz, Santa Cruz, CA **B.S. Computer Science (Expected June 2027)**
Relevant Coursework: Data Structures & Algorithms, Computer Architecture, Programming Abstractions
GPA: 3.65/4.0

WORK EXPERIENCE

Research Pathways Fellowship, JLab Smart Sensing June 2026 - August 2026

- Awarded the Research Pathways Fellowship after nomination by lab PI
- Teaching CMPM 118: Introduction to Research for Engineers in Fall 2026 & Winter 2027

Undergraduate Research Assistant, JLab Smart Sensing January 2026 - Present

- Developed and maintained real-time data visualization tools for monitoring live sensor data
- Led the design and development of NodeFlow, a web platform for tracking and controlling irrigation systems
- Collaborated with graduate researchers to support sensor integration, data analysis, and web-based monitoring workflows

Software & Data Intern, New Instance Coffee June 2024 - January 2026

- Automated Python and MySQL automation pipelines for analyzing product performance metrics.
- Used **Git** for version control and deployed containerized services to test and optimize web performance.
- Wrote Python scripts to monitor user activity and automate report generation for management.
- Designed and implemented lightweight backend workflows that improved page load times and operational metrics.

Lead Programmer, UCSC Rover Team Sept 2024 - Present

- Lead software engineer for a crossdisciplinary robotics team building computer-vision-driven autonomy systems.
- Programmed control logic and image processing in C++ and Python on Linux-based systems.
- Integrated OpenCV models for terrain recognition and data capture from dual-camera setups.
- Managed Git-based repository workflows and created modular **CI/CD testing pipelines** with Docker.
- Built automation scripts for sensor calibration and telemetry analysis.

TECHNICAL PROJECTS

Custom HTTP Server — C, POSIX Sockets, Multi-threading, Systems Programming November 2025 - December 2025

- Built a custom HTTP/1.0 server in C using POSIX sockets, supporting concurrent connections and static file serving.
- Created a HTTP request parser handling request lines, headers, Content-Length, URI validation, and malformed input.
- Designed a **multi-threaded** request-handling model to process multiple connections in parallel without memory leaks.
- Focused on reliability, correctness, and clear logging for debugging and support.

ArrowBerry — React Native, Expo Go, Supabase, Gemini March 2026 - Present

- Developed a full-stack mobile application that transforms grocery receipts into structured pantry data and recommends recipes based on available ingredients, prioritizing items that may spoil soon.
- Created the Supabase database schema and implemented user authentication for persistent, account-specific data storage.
- Built the recipe browsing and detail-view experience in React Native, including UI flows for viewing full recipe information.
- Integrated a receipt image-to-text pipeline using Gemini to support automated ingredient capture.
- As Scrum Master, led sprint meetings, coordinated task assignment, and removed team member inhibitors.

SKILLS

Languages	Python, C, C++, Java, JavaScript, SQL
Frameworks / Tools	Git, Docker, Linux, MongoDB, Flask, FastAPI
Systems / Platforms	Workflow Automation, Dashboard Development, Data Pipelines, CI/CD, System Debugging
Domains	Technical Operations Support, System Integrations, Process Standardization
Soft Skills	Collaboration, Analytical Thinking, Initiative, Technical Communication, Problem Solving