

# Dane Dathrego

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## EXPERIENCE

**e2f**, Los Altos, CA (Remote) — *AI Research Intern*    July 2025 - September 2025

- Authored detailed analytical reports on machine learning and AI systems, improving domain knowledge and technical communication
- Performed high-accuracy data annotation to support model training and evaluation pipelines
- Contributed to product research and development through exploratory analysis and structured content review

**Woodstock's Pizza**, San Luis Obispo, CA — *Team Member*    June 2025 - Present

- Deliver high-quality service in a fast-paced, collaborative environment, ensuring operational efficiency
- Communicate effectively with customers to support a positive and consistent dining experience

**Poinsettia Pavilion**, Ventura, CA — *Banquet Server*    March 2021 - August 2024

- Supported various events such as weddings and banquets with responsibilities including service, setup, cleanup, and customer interaction

## PROJECTS

**Poly1rover Project Port II** — *CPE Capstone I/II and Senior Project*    September 2025 - Present

- Porting the SIMBA Mars rover system to a Xilinx Zynq-7020 ROACH embedded platform to enable low-power autonomous operation
- Implementing a SPI-based Wi-Fi module, optimizing OS footprint for eMMC constraints, and integrating an I<sup>2</sup>C sensor bus (IMU, GPS, environmental sensors)
- Deploying, testing, and validating motor control, robotic arm systems, and vision pipelines with software-controlled power management and autonomous demo mode

**What's For Dinner?** — *Software Engineering I/II*    January 2025 - June 2025

- Designed and developed a full-stack web application using Agile development, participating in requirements gathering, UI/UX design, and sprint execution
- Implemented features across the stack using React, Node.js/Express, MongoDB, and automated testing with Jest, supporting deployment and continuous improvement

**Frequency-Controlled Actuator** — *Electrical and Electronic Circuits*    April 2024 - June 2024

- Collaborated on the design, construction, and testing of a modular signal-processing actuator system that drives a solenoid based on frequency analysis of input audio signals

## EDUCATION

**California Polytechnic State University**, San Luis Obispo, CA    September 2022 - June 2026 (Expected)  
— *B.S. Computer Engineering, Minor in History*

- Fourth year undergraduate with a 3.6 GPA
- Member of the Computer Engineering Society and Cal Poly CS+AI
- **Notable Coursework:** Systems Programming, Computer Architecture, Software Engineering, Computer Security, Networks, Database Systems, Project-Based Programming and Design, Digital Signals and Systems, Microcontrollers

## TECHNICAL SKILLS

**Languages:** C/C++, Python, JavaScript, SQL, Java, SystemVerilog

**Tools & Frameworks:** React, Node.js, Express, Jest, Git, MongoDB

**Domains:** Full-Stack Development, Embedded Systems, Robot Operating System (ROS), Networking, Database Management, Agile Development, Signal Processing