Nathen Paniagua

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EDUCATION

California State University, Fullerton **Aug 2023 - May 2027**

Bachelor of Science, Computer Science

- **Achievements:** Expected Graduation - May 2027
- **Coursework:** Object Oriented Programming, Data Structures, Databases & File Systems, Software Engineering, Compilers & Languages, Data Science & Big Data

TECHNICAL SKILLS

- **Programming Languages:** C++, Python, Swift, JavaScript
- **Frameworks:** React, Node.js, Tailwind CSS

PROJECTS

Gemini-Integrated Smart Fridge Assistant **Aug 2025 - Present**

- Developed a full-stack iOS application utilizing SwiftUI for a dynamic user interface and Core Data for efficient, local object persistence (fridge inventory), ensuring seamless offline data management.
- Engineered a secure, asynchronous API service layer connecting the mobile frontend to a serverless Firebase Cloud Functions (Node.js) backend, enabling real-time, personalized recipe generation via the Gemini API.
- Collaborated effectively with a three-person team throughout the SDLC (Software Development Lifecycle), successfully bridging mobile and cloud environments to deliver a scalable, multi-component architecture.
- Implemented robust data transformation and mapping logic to convert unstructured large language model (LLM) text responses into a structured JSON format, guaranteeing a clean and accurate display of recipes and user profile settings.

RC Car **Mar 2024 - May 2024**

- Collected and analyzed telemetry data (speed, torque, and motor response) from Arduino sensors using Python and pandas to identify inefficiencies, driving a 22 % improvement in acceleration consistency.
- Developed data-driven control algorithms leveraging regression analysis to fine-tune PWM motor signals and optimize battery efficiency under varying terrain conditions.
- Built automated test scripts to log and visualize performance metrics with Matplotlib, enabling the team to make quantitative design decisions during weekly sprint reviews.
- Collaborated cross-functionally with ME and CE peers, translating raw hardware data into actionable insights that informed mechanical calibration and system reliability validation.

EXPERIENCE

Smart & Final | *Stocker* **Feb 2022 - May 2023**

- Regularly emptied trash cans, cleaned, and sanitized restrooms to uphold cleanliness and sanitation standards, fostering a hygienic environment for both customers and staff.
- Sorting products, facing shelves, and made sure groceries were neatly displayed, I made sure the store looked clean, which improved both the aesthetic attractiveness and the ease of finding products.
- Ensured that every customer could easily locate the items they were searching for when asked for assistance. Additionally helped customers transport their purchases to their vehicles whenever they needed extra support.
- Managed and processed incoming freight and inventory, ensuring accurate stocking and rotation of perishable and non-perishable goods to minimize waste and maximize product freshness and availability.

LEADERSHIP & ORGANIZATIONS

CSUF Theta Tau Professional Engineering Fraternity | *Potential New Member Parent* **Aug 2025 - Present**

- Directed mentorship and onboarding for 20+ engineering students, leading weekly development sessions focused on academic success, teamwork, and professional readiness, achieving a 100% program completion rate.
- Served as the communication bridge between executive leadership and new members, facilitating information flow and conflict resolution that maintained organizational transparency and member satisfaction above 90%.
- Coordinated interdisciplinary team projects blending mechanical engineering, computer science, computer engineering,and electrical engineering principles, fostering collaboration and technical confidence among new members.
- Applied data-driven feedback loops from surveys and one-on-one check-ins to identify skill gaps, iteratively improving mentorship materials and boosting overall participant engagement by 30%.