

Nathan Huang

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Burlingame, CA
nthuang.github.io

Second-year Computer Science student at California Polytechnic State University, seeking internship opportunities in software engineering to apply my skills and gain hands-on experience to further my development.

EDUCATION

California Polytechnic State University

Bachelor of Science in Computer Science

San Luis Obispo, CA

Sept 2023 - June 2027

Relevant Courses: CSC 349 - Design and Analysis of Algorithms, CPE 357 - Systems Programming, CSC 248 - Discrete Structures, CPE 225 - Introduction to Computer Organization, CSC 203 - Project-Based Object-Oriented Programming and Design, CSC 202 - Data Structures

PROJECTS

Fitforge | *JavaScript, React, Node.js, Express.js, MongoDB, ExerciseDB API*

- Developed a full-stack fitness planner application that enables users to create and manage personalized workouts and exercise splits, resulting in a user-friendly interface that enhances workout organization and tracking.
- Integrated the ExerciseDB API to dynamically populate exercise data, improving user engagement through access to comprehensive exercise information and multimedia resources.
- Utilized React for the frontend and Node.js with MongoDB for the backend, ensuring a responsive design and robust data management that accommodates user preferences and performance tracking.

Spotlist | *JavaScript, React, Spotify API*

- Engineered a seamless user experience by implementing a responsive UI using React, enhancing user engagement significantly.
 - Integrated the Spotify API to enable real-time song search and playlist management, allowing users to efficiently curate their favorite tracks.
 - Optimized state management in the application for improved performance, resulting in noticeable reductions in load times during playlist updates.
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EXPERIENCE

Software Engineer

Sept 2024 - Present

Cal Poly Robotics Club - UROV Team

San Luis Obispo, CA

- Developing algorithms for the UROV (Underwater Remotely Operated Vehicle) in the 2025 MATE ROV Competition, focusing on localization and navigation.
- Integrating SLAM with OctoMap to create and continuously update a 3D occupancy grid, facilitating real-time position tracking of the robot.
- Implementing A* for efficient global pathfinding, leveraging the 3D map from OctoMap to determine optimal routes while avoiding obstacles.
- Applying DWA to enable real-time adjustments to the robot's path, ensuring safe navigation in dynamic underwater environments.

Firmware Engineer

Sept 2024 - Present

Cal Poly Racing - Formula SAE

San Luis Obispo, CA

- Collaborate with the electronics and firmware subteam to learn and implement firmware development practices through hands-on onboarding projects.
 - Currently engaged in aerocan refactoring to improve the efficiency and functionality of the existing firmware for aerodynamics monitoring systems.
 - Work alongside experienced members to gain knowledge in circuit design, firmware coding, and system testing.
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Technical Skills

Languages: Python, Java, JavaScript, HTML, CSS, C, RIS-V Assembly

Frameworks: React, Node.js, Express.js

Developer Tools: Git, Visual Studio Code, IntelliJ, MongoDB, Postman, npm

