

JUSTIN YANG

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EDUCATION

UNIVERSITY OF CALIFORNIA - SAN DIEGO (UCSD)

Graduation: June 2026

Bachelor of Science - BS, Major in Computer Science

GPA: 3.84

Coursework: Data Structures, Algorithms, Systems Programming, Software Engineering, Operating Systems, Database Systems

SKILLS

Technical Skills: Python, Java, C++, C, JavaScript, MySQL, Git, Linux

Language: English, Mandarin

EXPERIENCE

Software Engineer Intern | Tag-N-Trac

June - August 2024

- Designed and implemented an AI assistant in Python using OpenAI's Assistant API for natural language queries on the Tag-N-Trac dashboard, enhancing user experience, query efficiency, and analysis ability.
- Implemented backend integration with Tag-N-Trac API endpoints for comprehensive asset lifecycle tracking, sensor data retrieval, alert management, and report generation, streamlining logistics and monitoring processes.
- Engineered OpenAI Assistant instances to interpret user queries, extract relevant parameters, and deliver accurate, analytical, and formatted responses.

Software Engineer Intern | Hermes Epitek

July - August 2023

- Developed a dynamic web application enabling customizable data visualization through various graph types (e.g. bar, trend, and Pareto) to facilitate analysis based on user-defined filters (e.g. time, location, and type).
- Transformed historical raw factory alarm data into graphs using JavaScript, HTML, CSS, PHP, Chart.js, and MySQL enhancing data accessibility and allowing users to extract actionable insights such as historical statistics and trends to inform operational decision-making and process optimization projects.
- Optimized data accuracy and accessibility by utilizing API integration for querying and filtering data to extract relevant information from the factory alarm database.

Software Researcher | UCSD

Sept 2023 - June 2024

- Developed "Proofessor", an AI tutor leveraging the GPT-4 LLM to guide students in writing informal mathematical proofs in UCSD's Discrete Mathematics course, achieving improved tutoring efficiency compared to traditional methods.
- Utilized Python and prompt engineering to interface with the OpenAI API, creating dynamic, multi-round interactions with students, and providing tailored feedback on proof-writing stages, from problem comprehension to proof validation.
- Integrated auto-formalization of students' proofs into Lean 4, providing a robust second layer of verification to the AI tutor's responses.
- Utilized the Gradio framework to develop an interactive and user-friendly web interface.

Embedded Systems Developer | UCSD

Sept 2022 - 2023

- Member of Triton Robotics working to elevate the efficiency of the power management systems for full-sized robots utilizing C++ on STM-32 Nucleo boards in a Linux environment.
 - Implemented and programmed a power limiting software to optimize power distribution and ensure peak performance while adhering to the predefined operational limitations of the RoboMaster Competition.
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LEADERSHIP ROLES

Computer Science Tutor | UCSD

Sept - Dec 2023

- Led lab sessions of 80 students in CSE 15L (Software Tools & Techniques Lab) and assisted in the teachings of Linux OS, Vim, writing shell scripts, testing tools such as JUnit, and version control through Git.
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HONORS

ServiceNow Scholar

2022

- Selected as 1 of 9 undergrad CS students within the Jacobs School of Engineering

Inclusion Diversity Excellence Achievement (IDEA) Scholar

2022

- Selected as 1 of 40 out of 400 applicants within the Jacobs School of Engineering