BRANDON ENG

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EDUCATION

Bachelor of Science in Computer Science, California Polytechnic University, San Luis Obispo — Expected 2025
Honors: Engineering Dean's List (3x) — Current GPA: 3.461
Relevant Coursework: Data Structures, Intro to Computer Organization, Project-Based Object Oriented Programming, Discrete Mathematics, Systems Programming, Computer Architecture, Database Systems

SKILLS

Certifications: The Complete 2023 Web Development Bootcamp (Udemy, in progress)
Languages: Python, Java, C, HTML, CSS, JavaScript, SQL, Assembly
Frameworks: Bootstrap, JQuery, Express.JS, React.JS
Software: Github, VSCode, IntelliJ IDEA, Node.JS, SQLite3, MySQL, Eclipse IDE, Arduino IDE, Vim

EXPERIENCE

Techmaster — Mar 2022 - Mar 2023
Cal Poly Chinese Students' Association — *San Luis Obispo, California*

- Revamped and maintained the official website of Cal Poly Chinese Students' Association (calpolycsa.org) through the use of Squarespace, resulting in a 50% increase in unique visitors and a 25% decrease in bounce rate.
- Directed stage setups, lighting arrangements, and technical cues during events with performances through detail-oriented minute-by-minute planning which resulted in flawlessly executed events with no technical errors.

1st Place Winner — Apr 2022
SLO Hacks 2022 — *San Luis Obispo, California*

- Developed "Skateboard Lights", an innovative project featuring left and right turn signals for a skateboard based on board tilt during rides within a 24-hour time frame among 60 other teams.
- Fostered a collaborative environment that encouraged sharing of ideas and productive brainstorming sessions.
- Utilized Arduino software to program lighting patterns that integrated into skateboard hardware without errors.

PROJECTS

Minimal HTTP Web Server, Systems Programming Final Project

- Developed a minimal HTTP server using C language, that serviced multiple client GET, HEAD, and PUT requests by forking child processes to handle the actual request logic. The server also ensured efficient handling of multiple simultaneous requests and error handling.
- Designed and implemented a key-value store with FIFO communication, allowing efficient storage and retrieval of data via HTTP requests through the use of a database file and hash table implementation.
- Leveraged low-level socket programming to establish network communication, allowing server-client connection.

Modified Virtual World, Project-Based Object-Oriented Programming and Design Final Project

- Refactored entity classes into a hierarchy of abstract classes to limit duplication while updating a UML diagram.
- Implemented A* pathing algorithm using PathingStrategy interface, improving entity navigation in the world.
- Created world-changing event triggered by mouse-click, resulting in a modification of background tiles and behavioral change of entities.