Tyler Baxter

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Portfolio: baxtertyler.github.io

Education

California Polytechnic State University, San Luis Obispo **Sept 2021 - Present**

- Bachelor of Science in Computer Science
- Current Cumulative GPA: 3.5, 4x Dean's List
- Algorithms, Data Structures, System Programming, Object-Oriented Programming and Design, Introduction Software Engineering
- Expected graduation in Spring 2025

Work History

Software Engineer **Dec 2023 – Present**

- **Food Drops**
- Spearheaded end-to-end development of a dynamic web application
- Employed MongoDB for database management, React for front-end development, and Express.js/Node.js for backend scripting, ensuring seamless integration and optimal user experience.
- Took charge of the UI/UX design using Figma, fostering a cohesive and appealing user interface

Instructional Student Assistant **Jan 2024 – Present**

- **California Polytechnic State University**
- Provided invaluable support to students in computer science lab classes by offering guidance on coding queries, assisting with debugging, grading assignments, and answering technical questions.
- Contributed to the overall educational process by ensuring accurate assessment and timely communication of feedback, fostering a positive and collaborative learning environment.

Projects

Crib **Sept 2023 – Dec 2023**

- Sole backend engineer responsible for implementing the entire backend infrastructure.
- Established a Rest API from the ground up using Node.js and Express.js, optimizing data communication between the front and back ends
- Implemented the setup and management of a cloud-based database to ensure seamless storage and retrieval of critical project data.
- Established user authentication mechanisms, fortifying the platform's security and privacy features.

The Infinite World Simulation **Dec 2022 – Feb 2023**

- Program created in Java
- Constructed an endless simulation of a virtual world containing interacting entities with behavior changes based on simulated events
- Devised and implemented an A-star pathing strategy to allow effective entity traveling
- Object-oriented programming style with a focus on inheritance and abstract classes

MIPS simulator front-end assembler/parser **Sept 2023 – Nov 2023**

- Two-pass SPIM emulator to run MIPS assembly code, created in Java
- Implemented functionality for stepping through the program on a line-by-line basis or executing the entire program. Enhanced user control by providing real-time access to memory and register values
- Expanded the emulator's capabilities by incorporating a pipeline and branch predictor, including precise stall and squash mechanisms when needed

Skills

- **Languages**: Java, Python, C, C++, React/JavaScript
- **Technologies**: Rest API, NodeJS/Express, MongoDB/MySQL, Linux, Git, Tower/GitHub,
- **Personal Skills**: Problem solving, Team leadership, Interpersonal communication, Adaptability