Lucas Zhong

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EDUCATION

University of California, Irvine | B.S. in Computer Science, Minor in Mathematics Expected: Spring 2027

GPA: 3.8

Relevant Coursework: Data Structures and Algorithms, Machine Learning and Data-Mining, Operating Systems, Programming with Python Libraries, Computer Networks, Internet of Things Software and Systems

Organizations: IEEE @ UCI, Video Game Development Club

SKILLS

- **Programming Languages:** Python, Typescript, Javascript, SQL, C++, C, Java, Rust, Bash
- **Libraries/Frameworks:** Node.js, Express.js, React, TailwindCSS, Chart.js, NumPy
- **Technologies:** PostgreSQL, Docker, Git, GitHub, AWS, Redis, Godot Engine, Unity Engine, Apache, Linux, Vim

EXPERIENCE

Software Engineer Intern | *Perfect365, Inc.* June 2023 – September 2023

- Engineered a high-performance **Unity/C#** application for 3D scene visualization, integrating models via an internal **RESTful API**. Optimized rendering stability by implementing a custom **object pooling and caching solution** that reduced frequent frame spikes by **80%,** measured using the Unity Profiler.
- Developed a data analytics web dashboard with **HTML, CSS,** and **Javascript** (using **Node.js, TailwindCSS, Chart.js),** providing data visualizations of company datasets, deployed via an internal **Apache** server.
- Parsed and filtered JSON datasets containing **100,000+** entries, rendering interactive graphics that highlighted key user trends.

Student IT Helpdesk Technician | *UCI Social Sciences Computing Services* October 2024 – Present

- Developed a **Bash** script that uses winget to update needed, standardized software, trivializing staff computer setups.
- Streamlined IT inventory data entry by integrating a custom **Google Apps Script** that abstracted tedious input steps, reducing manual work by **50%** and improving the reliability and consistency of the database.
- Troubleshooted computer issues in MacOS and Windows environments, documenting common issues for future reference.

Micromouse Staff | *IEEE @ UCI* May 2024 – Present

- Developed maze pathfinding software for an autonomous micromouse with an **STM32** microcontroller, achieving first in the 2025 All-American MicroMouse Competition.
- Implemented a diagonal pathfinding algorithm using floodfill and a path generation algorithm through a finite state machine using **C++** to ensure highly optimal routes to the goal positions.
- Programmed and tuned embedded **C** firmware to optimize robot smooth turns, working with encoders, PID, and sensors.

Production Officer | *Video Game Development Club @ UCI* Feb 2025 - Present

- Created and presented production workshops teaching the producer's role in the video game industry, covering tools like **Jira**, **Miro**, and **Excel/Sheets**, as well as methodologies and frameworks like **Agile**, **Scrum**, and **Kanban**.
- Co-directed 2 quarterly pitch projects, serving in the roles of gameplay programmer, producer, and technical artist.

PROJECTS

Socratic Tutor AI | *Solo Project* July 2025 – Present

- Built a chatbot with a **React** and **Typescript** front-end that acts as a Socratic tutor, providing incremental help and hints for solving homework problems.
- Developed a **Node.js** back-end with **Express.js** routes to query the OpenAI API, using **Supabase** for JWT-secured user authentication, a **PostgreSQL** database for user data, and **Redis** for rate limiting. Deployed on an **AWS EC2** instance.

Underwatertale | *Producer, Gameplay Programmer* October 2024 – Present

- Directed a team of 15+ in the creation of a top-down 2.5D role-playing game in **Godot Engine** with **GDScript.**
- Built a custom dialogue system with custom UI and animations on top of an open-source branching dialogue manager.
- Integrated tools for trivializing building in-game systems such as NPC and environment creation.
- Led production with **Agile** sprints and stand-ups for a team of **15+** to ensure timely feature and asset delivery.

Search Engine | *Solo Project* Feb 2025 – March 2025

- Programmed a multithreaded web crawler utilizing concurrency locks in **Python**, scraping websites **400%** faster than the single-threaded version on average.
- Developed an indexer and a search engine for **50,000+** web pages using tokenization libraries such as NLTK and BeautifulSoup, ranking queries with TD-IDF scores for better relevance.

Work Authorization: U.S. Citizen