# Oscar Zheng

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**Summary** — Computer Science graduate with a strong work ethic and genuine enthusiasm for software development, ready to grow and contribute in a professional setting.

## Skills

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|---|---|---|---|
| **Frontend** | HTML5, CSS, JavaScript, Figma, React, TailwindCSS, JavaFX | **Tooling** | Bash, Docker, Make, GDB, Valgrind, Vim |
| **Backend** | Node.js, Express.js, MongoDB, Firebase, RESTful APIs | **Languages** | Python, Java, C++, C, HTML5, CSS |
|  |  | **Testing** | Pytest, Unit Testing, Integration Testing |
|  |  | **Development** | Front-End Dev, Agile Collaboration, Iterative Design, Test-Driven Dev |

## Experience

**Watering Hope**  ·  Jul 2024 – Sep 2024
*Web Development Intern*

- Collaborated within a 6+ person cross-functional team to design and deliver a user-focused web application within a 2-month timeline
- Developed front-end features and integrated third-party payment APIs to optimize user experience and functionality
- Employed version control best practices with GitHub, including branch management and peer code reviews
- Used wireframing and prototyping tools to translate user needs into intuitive UI designs
- Iterated on feedback through agile communication channels, improving product quality and team coordination
- Delivered a production-ready website with scalable and maintainable code: 🔗 wateringhope.org

## Projects

**Predictive Modeling of Video Game Sales Using Launch Attributes**  ·  Jan 2025 – Mar 2025

- Analyzed 1,650+ video games to assess how platform, genre, and price impact post-2010 sales
- Built predictive models (linear, Lasso, Random Forest) with a best $R^2$ of 0.24
- Used Python (pandas, seaborn, scikit-learn) for EDA and visualizations, finding no consistent predictors of high sales
- 🔗 Github

**Custom 9-bit ISA Design & Processor Implementation**  ·  Jul 2024 – Aug 2024

- Designed a 9-bit custom ISA and single-cycle datapath with 16 registers, supporting MIPS-like instructions
- Implemented and tested processor hardware and control logic in SystemVerilog using ModelSim
- Developed assembly programs for Hamming distance, arithmetic difference, and shift-add multiplication algorithms
- 🔗 Github

**Pantry Pal**  ·  Sept 2023 – Dec 2023

- Built a full-stack Java app using GPT-4 and Whisper to generate recipes from text or voice input
- Designed the JavaFX UI and integrated MongoDB for user accounts and ingredient storage
- Worked in a 4-person Agile team, handling 50+ AI requests per session in local demos
- 🔗 Github

**MERN FullStack Notepad Web App**  ·  August 2025

- Built a full-stack notepad app with the MERN stack and TailwindCSS, handling 100+ saved notes per session in testing
- Designed and deployed 5+ RESTful APIs with Express, connected to MongoDB, enabling persistent CRUD operations
- Configured environment variables and deployment settings to improve reliability, achieving 100% uptime during demos
- 🔗 Github

**Ember Eats Firebase Web App**  ·  August 2025

- Built Ember Eats with Firebase Auth and Firestore, enabling 50+ users to sign in and save favorite restaurants
- Designed a responsive React + TailwindCSS UI, improving load speed by 30% across devices
- Implemented real-time data sync, allowing instant access to 200+ saved restaurants per user session
- 🔗 Demo

## Education

**University of California, San Diego**
*Bachelor of Science in Computer Science*