# EVE ZHANG

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## Education

**University of California, Irvine**                                    Sep. 2022 – Jun. 2024
*Master of Science in Computer Engineering, GPA: 3.84/4.0*                    *Irvine, California*

**Wuhan University**                                                    Sep. 2017 – Jun. 2021
*Bachelor of Engineering in Computer Science and Technology, GPA: 3.61/4.0*          *Wuhan, China*

## Experience

**California Institute for Telecommunications and Information Technology**    Jul. 2023 – Jun. 2024
*Software Engineer Intern*                                                    *Irvine, California*

- Developed a **React**-based website for an industrial **IoT** system featuring more than **40** sensor nodes to monitor the real-time status of semiconductor manufacturing machines, enabling operators to track facilities' states **24/7**.
- Designed an on-demand caching microservice using **Python** and **Flask** that archives time-series data, audio, and video footages encoded with FFmpeg for specified durations, supplying training data for machine learning modules in the backend.
- Created a self-hosted **GitLab** instance, customized **CI/CD** pipelines and server configs to automatically deploy **Docker** images to the server and **15** Raspberry Pi sensor nodes.

**Skyworks Solutions**                                                       Jan. 2024 – Jun. 2024
*Data Analyst Co-op*                                                         *Irvine, California*

- Developed a user-friendly **Power BI** data analysis tool that tracks product demand forecasts, compares data across 3 systems, and visualizes trends, to enhance forecast accuracy and support data-driven decision-making across a 10-year horizon (2018-2028). The tool is used regularly by multiple teams of more than 20 people.
- Composed **SQL** scripts to collect **>2M** rows of data from across 5 databases, enabling pinpoint and comprehensive analysis of specific products' sales performances.

## Selected Projects

**AI-Enhanced Hacker News Clone**                                           **TypeScript, Next.js**

- Developed a Hacker News clone using TypeScript and Next.js, integrating **Tailwind CSS** for responsive and modern UI design, enhancing user experience and performance.
- Implemented **AI-driven** features, including personalized news feeds and advanced search capabilities, by leveraging the OpenAI API and the Hacker News API to provide relevant content.
- Enhanced user engagement with interactive elements, including dark mode toggle and infinite scrolling.

**GitHub User Finder**                                                      **JavaScript, React.js**

- Developed a web application with **React** and GitHub **REST API** to search users and showcase their profiles.
- Built 4 web pages using **Tailwind CSS** with Daisy UI, yielding a sleek and modern interface.
- Used Redux actions to call the APIs conveniently, enabling more than 5 functionalities such as user search, results clearing, profile display, and error alerts.

**IoT System Database Transaction Simulator**                              **Python, SQL, Docker**

- Implemented a database transaction simulator in Python for **PostgreSQL** by preprocessing and analyzing the features from example queries of approximately **3GB** in size.
- Executed **14.9M** queries in 7 minutes on provided hardware, achieving ∼40,000 records per second in throughput.
- Tuned the simulator in three dimensions: number of threads, transaction size, and levels of consistency, to enhance overall database transaction throughput by **31.6%**.

## Skills

**Languages**: Python, JavaScript, Java, TypeScript, HTML, CSS, C, SQL, MATLAB
**Frameworks**: React, Flask, Pandas, Numpy, Node.js, Express.js, Chart.js, Material UI,
**Tools**: VS Code, PyCharm, Linux, Git, Docker, GitLab CI/CD, Wireshark, Postman, BurpSuite, Markdown, Excel