Zhaozhan Huang

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Education

Boston University **Sep 2023 – Jan 2025**
MS, Computer Science (GPA: 3.7) *Boston, MA*

Sun Yat-sen University **Sep 2019 – June 2023**
BS, Information and Computing Science *Guangdong, China*

Technical Skills

Languages: C, C++, JavaScript, TypeScript, Python, Kotlin, Golang, HTML/CSS, SQL

Frameworks/Packages: React.js, Express.js, Next.js, Android, NumPy, Pandas

Technologies/Developer Tools: Git/GitHub, MySQL, MongoDB, Azure, Docker, Linux/Bash Shell, Android Studio

Projects Experience

BU Spark! Bad Landlord | *Next.js, TypeScript, PostgreSQL, Git* **May 2024**

- Directed an agile team of 4 to create a **Next.js** frontend, showcasing property violations in the Boston area through dynamic data visualization. Utilized Git and GitHub for efficient version control and collaboration.
- Implemented a responsive map using **Mapbox GL JS** to pinpoint landlord locations, enhancing user interaction and accessibility. Employed **Tailwind CSS** to accurately translate UX/UI designs from **Figma** into functional user interfaces.

MapReduce System | *Go, Shell* **Jan 2024**

- Engineered a simplified **MapReduce** framework leveraging mutexes, channels, and condition variables within **Goroutines** to ensure efficient parallel computation and robust fault tolerance.
- Architected and executed a fault-tolerant system for both Map and Reduce phases, incorporating a dynamic master-worker model for task reassignment in the event of node failures, thereby maximizing data processing efficiency and system scalability.

Reading List Web App | *React, JavaScript, Express, MongoDB, Git* **Oct 2023**

- Developed a comprehensive full-stack application facilitating user authentication, goal setting, and progress tracking, integrating **React** and **Redux Toolkit** for front-end state management, with **Express** and **MongoDB Atlas** for scalable REST API backend services.
- Adopted **MVC** architecture to enhance development efficiency and code maintainability. Utilized **Bulma CSS** for crafting a responsive and engaging user interface, significantly improving user experience and satisfaction.
- Automated deployment and scaling through **CI/CD pipelines** to **Azure App Service**, employing **GitHub Actions** to ensure continuous availability and scalability.

Computer Graphics Course Project | *Python, OpenGL* **Sep 2023**

- Integrating **pyopengl** into GUI created by **wxpython** to show carious geometric surfaces.
- Crafted custom shaders in **GLSL** to simulate advanced illumination models and visual effects, such as texture and normal mapping, elevating the realism and aesthetic quality of 3D environments.

Relevant Coursework

- Data Structures & Algorithms
- Operating System
- Object Oriented Programming
- Database
- Network
- Probability & Statistics

Others

- Microsoft Certified: Azure Fundamentals, Certification, 2023
- Personal Website: https://zhzh258.github.io/about/