ZHUOYANG SUN

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EDUCATION

Purdue University   Dec 2025 (Expected)
Master of Science in Computer Engineering & Computer Graphics (GPA: 3.95 / 4.00)   West Lafayette, IN

Tongji University   Jul 2023
Bachelor of Science in Computer Science (GPA: 89.00 / 95.00)   Shanghai, China

INTERNSHIP EXPERIENCE

Zoom   Jun 2024 – Aug 2024
QA Engineer Intern   Hangzhou, China

- Developed and implemented an automated testing pipeline for Zoom Docs using **Python**, **Selenium**, and **GitLab CI**, reducing manual testing efforts by **60%** and increasing test coverage by **40%**. This automation significantly decreased repetitive tasks such as creating, deleting, or modifying large numbers of documents.
- Authored over **50 test automation scripts** in **Jenkins**, automating **30%** of previous test scenarios, which enhanced test coverage, improved efficiency, and reduced human error in testing processes.
- Utilized **Git** for version control and collaborated with cross-functional teams through **Confluence** for documentation, ensuring clear communication of requirements among product managers and engineers across different locations (**Hangzhou, Wuhan, San Jose**). Effectively coordinated across different time zones and cultural contexts to align development and QA efforts.
- Conducted extensive **API testing** within a team of 30, using **Jira** to report and track over **150 bugs**, detecting at least **1-3 bugs** per test requirement. Contributed significantly to improving the overall stability and performance of the product.

Ali Cloud   June 2022 – September 2022
Software Development Engineer Intern   Hangzhou, China

- Developed an innovative plugin for **Greenplum** (parallel PostgreSQL) to monitor database storage and alert administrators, preventing overflows and ensuring optimal performance.
- Collaborated with a team of 10 engineers to enhance the cloud database system, significantly improving column processing capabilities and user experience using **C++, Python, and SQL**.
- Optimized system performance by identifying bottlenecks with **flame graphs**, resolving issues like insufficient memory allocation and resource-intensive functions.

ACADEMIC EXPERIENCE

Purdue University PIVIL   West Lafayette, IN

- First author of "LiDAR-Forest Dataset" published in **IEEE VR 2024**, featuring 50 forest types and over 100 tree species.
- Developed a high-fidelity LiDAR simulation in **C++** using **Unreal Engine 5**, enhancing realism and accuracy for virtual forestry scanning.
- Collaborated with a multidisciplinary team to innovate simulation techniques and data acquisition methods.

FNAF 5 Fan Game Project   Oct 2023 – Nov 2023
Game Developer   West Lafayette, IN

- Developed a game inspired by *Five Nights at Freddy's 5* for PC and Quest 3 VR using **C++**, **OpenGL**, and **OpenXR**.
- Implemented core game logic and scene management, including dynamic states, AI behaviors, and a **JSON-based configuration system** for dynamic game settings.
- Utilized **OpenGL** and **GLSL** for rendering and shader management to create visually engaging graphics.
- Integrated VR controls for Quest 3 using **OpenXR**, enhancing player immersion and interaction.

TECHNICAL SKILLS

Languages: Java, Python, JavaScript, C, C++, C#, R, PHP, Golang
Technologies: AWS EC2, AWS S3 Bucket, Angular, Confluence, CUDA, Docker, Elasticsearch, Flask, Git, GitLab CI, GLSL, Grafana, Greenplum, GNU Debugger (GDB), Jenkins, Jira, JSON, Kubernetes (K8s), LangChain, Linux, Microsoft SQL Server, Microsoft Visual Studio, MongoDB, MySQL, Node.js, OpenGL, OpenXR, PostgreSQL, Pytest, PyTorch, React, Selenium, Spring Boot, Tableau, Unreal Engine 5, Vim, Vue.js