

# CHENSHUO-JUSTIN ZHU

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## Technical Skills

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**Languages:** C/C++, JavaScript/TypeScript, Java, REST API, JWT, Python, C#, Bash, SQL, HTML 5, CSS 3, PHP  
**Frameworks:** React.js, Next.js, Tailwind CSS, Node.js, Spring Boot, Spring MVC, Spring Data, JUnit  
**Databases & ORMs:** MySQL, PostgreSQL, Drizzle ORM  
**Developer Tools:** Git, Postman, VS code, IntelliJ, Cursor, Spring Tool Suite 4, Unity, Eclipse  
**Platforms & Environments:** Apache Tomcat, Linux, Vercel

## Experiences

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### Beyz AI

May 2025 – Aug 2025

*Full Stack Developer*

- Contributed to key features for Beyz AI's GPT-based real-time interview copilot using **Next.js**.
- Achieved a **20%** reduction in token costs by optimizing compression of user background data through **prompt engineering**. Utilized **OpenAI's AI SDK** to enable efficient GPT integration.
- Implemented a dynamic prompt versioning mechanism with **TypeScript**, **Drizzle ORM**, and **PostgreSQL**, ensuring seamless updates, alignment across database and API configurations and delivering the latest prompts for an enhanced user experience.

### Information Systems & Technology Department, University of Waterloo

Sep 2024 – Dec 2024

*Presentation Technologies Support Technician*

- Developed a web-based attendee management system with **PHP**, **JavaScript**, and **PostgreSQL**, integrating an interactive **SVG** seating plan that improved seat assignment efficiency by **75%**.
- Delivered technical support across **90%** of campus classrooms for maintaining AV equipment, resolving **200+** issues monthly. Designed 3D-printed mic-testing tools to improve sound quality assessments in Board & Senate rooms.

### Huadian Energy Development Co. Ltd

Jan 2024 – May 2024

*Full Stack Developer Intern*

- Designed and developed the **Supplier Management module** within a Procurement and Billing Management System.
- Created a responsive web interface using **React.js/TypeScript**, ensuring cross-browser compatibility and enhancing user experience for **3000+** users.
- Built backend services with **Java/Spring Boot**, integrated with **PostgreSQL** for database management, and utilized **JSON** and **REST API** for efficient data interchange, reducing API response time by 30%.

## Projects

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### Photo Gallery | [Website](#) [GitHub](#)

May 2025 – Aug 2025

- Built a responsive image gallery with real-time upload functionality using **UploadThing API**, implementing click-to-select file uploads with toast notifications for enhanced user experience.
- Secured user access with **Clerk's** role-based authentication and integrated **PostgreSQL** and **Drizzle ORM** for efficient data storage.
- Designed an intuitive user interface with **Next.js App Router**, featuring modal-based image viewing and dynamic routing for individual image pages, while implementing server-side rendering for optimal performance.
- Integrated comprehensive analytics and monitoring using **PostHog** and **Sentry** for error monitoring, while implementing rate limiting with **Upstash Redis** to ensure application stability.

### Sorcery - Card Game

May 2024 – Aug 2024

- Worked in a **3-person team** to design a collectible card game using **C++**, implementing turn-based mechanics and optimizing game logic for smooth gameplay
- Utilized the **Factory & Decorator design pattern** in C++ to efficiently create diverse card types and abilities, collaborating with teammates to develop cohesive player actions and game logic.

### Interactive Museum Guide Website | [Website](#) [GitHub](#)

Sep 2022 – Jun 2023

- Constructed an interactive museum guide website using **HTML**, **CSS**, and **JavaScript**, enabling users to explore world-renowned museums with features like an creative world-map interface and a magnifying tool for artifact viewing.

## Education

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### University of Waterloo

Sep. 2023 – Present

*Candidate: Bachelor of Computer Science*

*Waterloo, ON*

- Awarded President's Scholarship of Distinction