Chenshuo-Justin Zhu

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Education

University of Waterloo — **Sep. 2023 – Present**
Candidate: Bachelor of Computer Science — *Waterloo, ON*
- Awarded President's Scholarship of Distinction

Technical Skills

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

Experience

Full Stack Developer — **Sep 2025 – Dec 2025**
Beyz AI
- Reduced token usage by **42%** for Beyz AI's GPT-based interview assistant by iterating **prompt-engineered** compression prompts for user background data that preserves tone/format, retains key entities, and trims filler.
- Implemented a versioned prompt system in **TypeScript** with **tRPC** and **PostgreSQL/Drizzle**, revalidating cached user data to prevent stale prompts and ensure consistent outputs.
- Improved query performance by **4×** for a **10k-row** token-usage log by adding **PostgreSQL** indexes and leveraging **Drizzle ORM**'s type-safe SQL builder for fast, user-scoped lookups with minimal ORM overhead.
- Enhanced the multi-step user landing/setup flow in **Next.js** by refining responsive layout, building shareable **SVGs** and integrating reusable **Storybook** components.

Software Engineer — **May 2025 – Aug 2025**
Yoyi Internet Technology Development Co. Ltd
- Designed and developed a **Supplier Management module** within a billing system, streamlining supplier workflows and improving procurement visibility for internal teams.
- Enhanced usability and performance for over **5,000** users by building a responsive, cross-browser frontend using **React.js** and **JavaScript/TypeScript**.
- Cut API response time **36%** by optimizing **Spring Boot REST** endpoints with **MyBatis-Plus** pagination to reduce **PostgreSQL** reads and payload size, validated via **Postman** collections.

Presentation Technologies Support Technician — **Sep 2024 – Dec 2024**
Information Systems & Technology Department, University of Waterloo
- Improved Board & Senate rooms seat assignment efficiency by **75%** by developing an attendee management web system with **PHP**, **JavaScript**, and **PostgreSQL** using an interactive **SVG** seating plan.
- Delivered high-touch AV support across **90%** of campus classrooms, resolving **350+** issues by communicating effectively with professors, giving patient step-by-step guidance.
- Strengthened audio reliability by installing next-generation wireless lavalier systems across **70+** classrooms and building **custom 3D-printed** tools to test microphone performance.

Projects

ImageNest | *Website* ⧉, *GitHub* ⧉ — **May 2025 – Aug 2025**
- Built a dynamic image gallery in **Next.js** with **App Router and modals**, improving transitions and navigation.
- Implemented access control with **Clerk** and optimized cold-starts via caching and rate limiting (**Upstash Redis**).
- Enabled secure uploads and efficient rendering using **UploadThing** and **PostgreSQL** in server-rendered stack.

Sorcery - Card Game — **May 2024 – Aug 2024**
- Collaborated in a 3-person team to develop a turn-based card game engine using **C++** and **OOP principles**.
- Utilized **UML** to plan game and implemented modular card components within **MVC pattern** for flexible extension.
- Partnered with teammates to integrate and debug match flow and player actions, ensuring smooth gameplay.

Interactive Museum Guide Website | *Website* ⧉, *GitHub* ⧉ — **Sep 2022 – Jun 2023**
- Constructed an interactive museum guide website using **HTML**, **CSS**, and **JavaScript** with unique features.
- Enhanced artifact viewing experience by implementing a **magnifying tool** on an creative **world-map interface**.