Yutong(Ethan) Zhu

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Education

University of Waterloo **Sep 2022 - May 2027 (expected)**
Computer Engineering *CGPA: 3.9/4.0*
Relevant Courses: Systems Programming and Concurrency, Algorithms and Data Structures, Digital Computation

Internship Experience

Tangam Systems **May 2024 – Aug 2024**
Quality Assurance Automation Developer - Cypress, JavaScript, SQL, SQL Server Management Studio *Waterloo, ON*
- Developed and tested a comprehensive web-based management system using both automation and manual testing.
- Developed and maintained test cases for UI responsiveness, file uploads/downloads, and navigation to ensure application robustness.
- **Leveraged object oriented programming principles with Page Object Models** to improve the readability and scalability of code in test automation suite.
- Reduced the automation suite's run time from **120 minutes to 55 minutes** by utilizing SQL to efficiently set up the testing environment.

AUAV Technology **Sep 2023 – Dec 2023**
Software Developer - TypeScript, React, Node, Express, MySQL, AWS *Calgary, AB*
- Designed and developed a SaaS web-based platform for online examinations using full-stack technologies.
- Managed a user base of **50+ paying customers**, implementing bug fixes and performance enhancements based on their feedback.
- Implemented features using **RESTful APIs** and UIs with **responsive design principles**, such as account creation, authentication, payment processing, content management, and online exams with user permissions.
- Reduced manual deployment efforts by **30 minutes per day** for co-workers by implementing a CI/CD pipeline with GitHub Workflow and AWS CodeDeploy

Extracurricular Activity

NiShang Club **May 2024 – Ongoing**
Web Development Team Lead - Next.js, TypeScript, Prisma, PostgreSQL, Vercel, Express, SocketIO *London, ON*
- **Managed a team of 6** to create a full-stack web application that provides booking services, and user communication services.
- Implemented pages using Next.js and TailwindCSS in alignment with Figma designs, collaborating closely with the UI designer.
- Facilitated weekly meetings to discuss progress and distributed tasks to team members, ensuring efficient workflow and project alignment.

Projects

typescript-eslint **Typescript**
- Involved in the **open source development** of typescript-eslint by implementing bug fixes, supporting its user base of 13 million on GitHub.
- Developed unit tests to corner cases to achieve **100% test coverage** and ensure project stability.
- Enhanced the ability to analyze and understand large, technically complex projects.

Clever Comrade (Winner at NewHacks 2023) **React, Express, Node.js, GitHub**
- Developed an AI-powered study tool providing class-specific answers from OneDrive materials.
- Built front end using Tailwind CSS and React, delivering fully responsive UI with features **within 6 hours**.
- Worked in a **cross-functional team of four**, responsible for system design, task allocation, and project success within a 24-hour hackathon.

Skills

Languages	JavaScript/TypeScript, Python, SQL, C/C++, C#
Web	HTML/CSS, React, Next.js, Tailwind CSS, SASS, Node.js, Express.js, Flask
Database	MySQL, PostgreSQL, Prisma, SQL Server Management Studio
Testing	Cypress, Selenium, Jest
DevOps	Git, Github, GitLab, AWS, Microsoft Azure, Vercel