Billy Lee

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Education

University of Waterloo – Honours Bachelor of Mathematics (GPA: 3.9/4.0)   Oct 2024

Experience

Lead Developer, University of Waterloo – Waterloo, ON   Jan 2024 – May 2024
- Led and developed a Next.js-based web platform for a figures-of-speech research group, serving 10+ researchers and enabling user submissions and annotations of figure instances.
- Revamped the CI/CD pipeline using GitLab, Docker, and Docker Compose, reducing deployment time by 70%.
- Established a robust staging environment to improve testing efficiency and reduce production defects by 90%, ensuring a more reliable and high-quality development workflow.
- Coordinated an Agile workflow, leading weekly stand-ups and code reviews for a team of 5 developers, and implemented a documentation site to maintain comprehensive, up-to-date project documentation.

Full Stack Developer, University of Waterloo – Waterloo, ON   Sept 2023 – Dec 2023
- Implemented advanced features like dynamic highlighting functionality with rich text support using Tiptap.
- Reduced page load time by 80% by consolidating data retrieval to a single API call with server-side props, utilizing Context API for efficient data distribution, and implementing pagination to minimize data overload.
- Engineered and tested 10 Golang REST endpoints backed by MySQL, improving query response times by 20%.
- Authored comprehensive tests using Jest and React Testing Library, increasing code coverage by 30%.

Software Developer Intern, Hewlett Packard Enterprise – Hong Kong, China   May 2023 – Aug 2023
- Developed and launched a React.js-based demo portal viewed by 10 internal stakeholders, effectively showcasing HPE GreenLake solutions and reducing the average demo preparation time by 50%.
- Automated and optimized demo workflows with Python and Bash scripts, and provisioned VM environments for demonstrations, reducing manual setup time by 80%.

Software Developer Intern, Bolee Machine Tool Ltd. – Hong Kong, China   Apr 2023 – May 2023
- Tackled the challenge of time-consuming manual product entries on the company's WordPress e-commerce site, previously reliant on a lengthy admin GUI process of around 5 minutes per product.
- Revolutionized product management by developing a Python-based automation tool using Selenium for the company's WordPress e-commerce site; achieved a 99% reduction in time required for bulk price updates.
- Managed and optimized the company's server infrastructure, configuring VPN and NAS storage to improve data security and accessibility.

Projects

UWPlan   github.com/pl3lee/uwplan
- Designed, engineered, and deployed a Next.js-powered degree planning webapp, serving 500+ daily users.
- Implemented a drag-and-drop interface using dnd kit and TailwindCSS, allowing for easy course planning.
- Integrated secure authentication using Auth.js with Google and GitHub OAuth providers.
- Implemented efficient data persistence using PostgreSQL with Drizzle ORM to manage student schedules.

Skills

Languages: TypeScript, Python, C++, Go, Bash, SQL, HTML/CSS
Technologies/Frameworks: React, Next.js, Node.js, TailwindCSS, shadcn/ui, dnd kit, Auth.js, Jest, React Testing Library, PostgreSQL, Drizzle ORM, Docker, Git, Linux/Unix