

57 Russell Hill Road  
Markham, Ontario, Canada  
L6C 2M5

# Billy Lee

(437) 224-6179  
billy.pl.lee@gmail.com  
https://billylee.me  
 

## Employment

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**Lead Developer / DevOps Engineer**      **University of Waterloo**      **Jan – Apr 2024**

- Developed a **Next.js**-based web platform for a figures of speech research group, enabling user submissions and annotations of figure instances.
- Revamped the CI/CD process using **GitLab pipelines**, **Docker**, and **Docker Compose**, automating and accelerating testing, building, and deployment phases, and saving over 30 minutes per deployment.
- Established a robust staging environment to streamline testing and quality assurance, ensuring a more reliable and efficient development workflow.

**Full Stack Developer**      **University of Waterloo**      **Jan – Apr, Sept – Dec 2023**

- Spearheaded the implementation of advanced features including **Rich Text Support** and dynamic highlighting functionality for annotations.
- 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 deployed robust backend endpoints for the **Golang**-based REST API with MySQL database.
- Authored comprehensive tests using **Jest** and **React Testing Library** to ensure code integrity and functionality.

**Software Developer Intern**      **Hewlett Packard Enterprise**      **May – Aug 2023**


- Developed and launched a **React.js**-based demo portal as the sole developer, effectively showcasing **HPE GreenLake** solutions and streamlining the demo process by at least 50%.
- Orchestrated the automation and optimization of demo processes for a range of HPE solutions, utilizing **Python** and **Bash** scripts, and managed **VMware** vSphere VM environments to ensure efficient and effective demo execution, reducing setup time by approximately 80%.

**Software Developer Intern**      **Bolee Machine Tool Ltd.**      **Apr – Jun 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.
- Revolutionized product management by developing a **Python**-based automation tool using **Selenium** for the company's WordPress e-commerce site; achieved a remarkable 99% reduction in time required for bulk price updates.
- Managed the company's server system, including configuring the VPN server for remote access and upgrading the storage of the NAS server.

## Projects

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- **Instagram Clone** . Developed an Instagram clone using Next.js, TailwindCSS, Express.js, MongoDB, Socket.io, and Node.js, replicating core features such as user registration, profiles, post creation, and real-time chat.

## Education

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**Waterloo, ON Canada**      **University of Waterloo**      **Sept 2020 – Aug 2024**

- Honours Bachelor of Mathematics. Cumulative GPA: 88.64/100.
- Double Major: Computational Mathematics, and Combinatorics & Optimization.
- Minor: Computer Science.

## Skills

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- **Languages:** TypeScript, JavaScript, HTML, CSS, Python, C++, Go, Bash, SQL, LaTeX, MATLAB
- **Technologies/Frameworks:** React, Next.js, Socket.io, Node.js, Express.js, MongoDB, MySQL, MaterialUI, TailwindCSS, Docker, GitLab CI/CD pipelines, Jest, React Testing Library, Selenium, Git, Linux/Unix.