Michael Le

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EDUCATION

University of Waterloo   Sep 2019 – Apr 2024 (Expected)
Candidate for Honours Bachelor of Computer Science (BCS)   *Waterloo, Ontario*
- 3.91 Cumulative GPA (out of 4.0), 91% Cumulative Average, Dean's Honour List

EXPERIENCE

Riot Games   May 2023 – Aug 2023
Software Engineer Intern   *Los Angeles, California*
- Refactored core game and engine level code in **C++** to support an unreleased feature for League of Legends
- Developed an enhanced pathfinding system using **HavokAI**, **reducing search times** by up to **33%**
- Built in-game debugging tools using **ImGUI** to help developers visualize pathfinding and movement data
- Shipped bug fixes impacting in-game UI and character spells using **Perforce**, improving player experience

Huawei Technologies Co., Ltd   Jan 2023 – Apr 2023
Compiler Software Engineer Intern   *Markham, Ontario*
- Wrote **SYCL** kernels for operators such as **fused multiheaded attention** with zero padding, using NVIDIA's **Cutlass** library, manual synchronization, and vector algebra to **reduce execution time** by **75%**
- Implemented **double buffering** to read and write data concurrently, **increasing kernel speed** by **10%**
- Researched and tested AI/ML operators to profile and improve Huawei's **BiSheng C++** abstractions

Riot Games   May 2022 – Aug 2022
Software Engineer Intern   *Los Angeles, California*
- Engineered a multi-team rate limiting solution using **Go**, capable of handling over **100k** API requests/min
- Spearheaded the project by writing **system architecture design documents** and planning tasks with Jira
- Utilized **Redis** as a distributed cache with multiple nodes, **eliminating downtime** if a node fails
- Created **Jenkins** multibranch pipelines to automatically test, lint, build, and deploy changes on push

Applyboard   Sep 2021 – Dec 2021
Software Engineer Intern   *Waterloo, Ontario*
- Built backend services with **Ruby on Rails** and **MySQL,** helping users search for data more accurately
- Secured APIs with a permission system using **Pundit**, protecting database from unauthorized users

Newtopia Inc.   Jan 2021 – Apr 2021
Software Developer Intern   *Toronto, Ontario*
- Created new public API endpoints in **Apex** with **improved security** protecting **10000 monthly users**
- Refactored **React Native** android application with **TypeScript** and reduced **memory usage by 25%**

Manulife Financial (Technology Division)   May 2020 – Aug 2020
Salesforce Software Engineer Intern   *Waterloo, Ontario*
- Created a data aggregation framework in **Apex** and **SOQL,** diagnosing **over 33%** of **service issues**
- Used **HTML** and **JavaScript** to display **6000+ live logs** every day, featuring tables, graphs, and filters

PROJECTS

Spatial.DJ | Build on Redis 2021 Silver Prize Winner   Apr 2021 – May 2021
- Built a web app where users can watch videos together, featuring dynamic volume based on avatar position
- Designed UI prototype using **Figma** and implemented responsive layouts using **React** and **Redux**

Tachometer for Rotating Magnetic Fields   Feb 2019
- Created a tachometer using **Arduinos** that detects the speed of nearby rotating magnetic fields
- Implemented a **C++** controller to calculate rotations per minute with an error of **±0.05 RPM**

SKILLS

- **Languages:** C++, Python, SQL, Go, C, TypeScript, JavaScript, HTML/CSS, Bash
- **Technologies:** Git, Perforce, Linux, SYCL, REST APIs, Node.js, Express.js, React, Redis, SQLite, Agile, Jira