

Joey Chuang

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EDUCATION

McGill University

BS in Computer Science

Montreal QC Canada

September 2019 – Grad May 2024

- Recipient of **Excellence Software Engineering Scholarship 2021 & Honor Roll Recognition of Excellence 2022**

SKILLS

Languages: Python | Java | C | SQL | C# | HTML/CSS | TypeScript | Bash/Shell | Go | R | Swift | Ocaml | CPP/C++ |

Frameworks/Tools: React | Node.js | MongoDB | Express.js | Docker | AWS (EC2, SQS) | Git/GitHub | Jira |

WORK EXPERIENCES

Lifion by ADP

Toronto, ON Canada

Software Application Intern (GPT Intern)

June 2023 – August 2023

- Utilized **Lifion internal software packages, React.js** and **Node.js** to develop and implement a French-translational tool in Lifion Autopay Payroll Engine, benefiting over 200,000+ Quebec French-speaking employees.
- Collaborated cross-functionally with Lifion developer teams to seamlessly integrate 7 new features into Lifion Compiler and Backend Platform API, leveraging expertise in **Node.js, React.js, MySQL**, and **GoLang**.

BlackBerry Limited

Mississauga, ON Canada

Software Developer Intern

January 2023 – April 2023

- Implemented the Start Button functionality in **C++ / CPP** for the In-Vehicle Software Platform (IVY), resulting in a performance enhancement of over 20% for PATEO automobile software.
- Engineered the Vehicle Camera HSI API for IVY by optimizing **Bash** script and **Docker** server, while implementing 20 regression testing features and 5 unit testing scripts, resulting in a notable 12.1% enhancement in overall system efficiency.

Provincial Health Service Authority

Vancouver, BC Canada

Software Developer Student CO-OP

May 2022 – December 2022

- Enhanced **Oracle PL/SQL** stored procedures to implement over 8 additional unique features and crafted **relational queries** for efficient retrieval of matching data sets from a database of 4,000,000 customer records.
- Developed scripts in **Oracle PL/SQL, Python**, and **Powershell** to detect missing data in the updated database, resulting in a 40% improvement in work efficiency for a team of 100+ analysts.

Kuiper Autonomy

Montreal, QC Canada

Lead Software Engineer

Sept 2023 – Present

- Collaborated with Dr. Yousefi to develop end-to-end shared autonomy solutions for industrial and research robots.
- Facilitated the safe integration of advanced AI and Robotics into human-robot teaming within industrial applications.

RESEARCH EXPERIENCES

Computational Biology Lab

Remote and Montreal, QC Canada

Machine Learning Software Research Assistant

June 2023 – Present

- Designed an **ML clustering** algorithm for the comparative analysis of 40 million genes and 2 million cells raw data in two artificial organoids (Ali Lung and Foxi Lung), leading to the identification of a superior and more effective organoid.

L1NNA Cybersecurity Research Laboratory

Remote and Kingston, ON Canada

Cybersecurity and AI Software Research Assistant

Sept 2023 – Present

- Developed a large language model that identifies software vulnerabilities at the binary level and cross-referenced the results with CWE checker outcomes.

PERSONAL PROJECTS

Game Center ([GitHub](#), [Demo](#))

- Built a resilient online social platform for gamers to exchange and acquire game strategies, utilizing the **MERN** stack (**MongoDB NoSQL, Express.js, React, Node.js**) and incorporating secure authentication measures.
- Created individualized **APIs** and implemented advanced encryption techniques using **bcrypt.js** to enhance data protection and safeguard personal information within **Atlas MongoDB**, resulting in a 95% reduction in potential security breaches.

Find The Shortest Path! ([GitHub](#) , [Demo](#))

- Implemented an **A*** algorithm program to efficiently calculate the optimal path between any two points on a grid.
- Optimized algorithm performance using heuristic functions and Python packages, including multiprocessing, heuristics and pygame, resulting in a 71% average runtime improvement.