

Carl Zhang

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🎓 EDUCATION

University of Waterloo, B.ASc / Computer Engineering / 4A

2019 – 2024

- **Relevant Coursework:** Fundamentals of Programming | Algorithms & Data Structures | Systems Program & Concurrency | Real-Time Operating Systems | Compilers | Database Systems | Computer Networks | Distributed Computing | Adaptive Algorithms | Computer Security

Waterloo, Canada

👛 PROFESSIONAL EXPERIENCE

SS&C Technologies, Full Stack Developer

Jan 2023 – present

- Designed **GraphQL** schemas and middleware for an optimized API architecture, enabling frontend applications to achieve rapid response times through customizable queries
- Leveraged **Angular/TypeScript** to develop the frontend interface for a modernized global recordkeeping solution tailored to financial service providers
- Prototyped a POC for enabling partial string queries on encrypted database fields, resulting in a **83%** reduction in query times, using **Java**, **Spring Boot**, and **PostgreSQL**

Toronto, Canada

Top Hat Monocle, Full Stack Developer

Jan 2022 – Apr 2022

- Developed a **RESTful API**, providing seamless integration of user invites and course enrollments functionality using **Django (DRF)**, **Postman**, and **DataDog**, serving millions of students
- Integrated **API** endpoints into frontend applications using **React**, **Redux**, **Helios**, and **LaunchDarkly** feature flags, ensuring smooth and efficient feature deployment
- Implemented a **React** command palette, enhancing site navigation and **QA** productivity for **100+** developers
- Performed programmatic **MySQL** database migrations to backfill data with minimal downtime
- Optimized **CRUD** operations by leveraging **Django** bulk actions to reduce query execution time by over **63%**

Toronto, Canada

Top Hat Monocle, Full Stack Developer

May 2021 – Aug 2021

- Spearheaded the creation of over **10** web-based **UI** components utilizing **React** and **styled components**, resulting in dynamic and responsive user experiences
- Implemented comprehensive unit tests, utilizing **Jest/Django** deployed on a **Jenkins** pipeline to reduce team wide code noncoverage from **4.6%** to **1%**

Toronto, Canada

Ricoh Canada, Application Developer

Sep 2020 – Dec 2020

- Migrated retiring **SharePoint Designer 2010** workflows to **Power Automate**, ensuring uninterrupted automation processes for **1500+** employees
- Created an automated COVID-19 screening tool using **Power Automate** to meet health regulations and streamline return to office processes

Mississauga, Canada

Transport Canada, Software Developer

Jan 2020 – Apr 2020

- Leveraged **Tesseract OCR** and **UiPath** to automate data form entry, scaling down process time by **~70%**
- Developed a **RPA** solution using **OCR** technologies to classify identity documents with **94%** accuracy

Ottawa, Canada

📁 PROJECTS

CarlZAlgo 📄

2023

- Implemented a **Python LSTM**-based stock prediction model using **Alpaca** trading **API** and historical OHLC data, resulting in a **8% CAGR**

SearchZRift 📄

2022

- Created a **Django/React** application, leveraging **Axios** generated **HTTP** requests to retrieve real time League of Legends player data from Riot's **3rd party API**
- Utilized **sklearn** decision trees to accurately predict game outcomes with a **91%** success rate

🧠 SKILLS

Languages (Java | Python | C++ | C | C# | JavaScript | TypeScript | HTML | CSS | GraphQL)

Frameworks (React | Angular | Node.js | Spring | Django | Bootstrap | .NET | JUnit)

Tools & Databases (Postman | Docker | Jenkins | DataDog | MySQL | PostgreSQL | DBeaver)