Qi (Tommy) Shu

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EDUCATION

Georgia Institute of Technology *Sept. 2024 - Present*
Computer Science (Computing System Stream) M.S.C.S.
- **Courses:** Graduate Introduction to Operating Systems, Advance Operating Systems

McMaster University *Graduated: Jun. 2024*
Computer Science (Co-op) Honours B.A.Sc. *cGPA 3.91 / 4.00*
- **Courses:** Distributed Systems, DBMS, Networks, Graphics, Compilers, Machine Learning, Algorithms, etc
- **Extracurricular:** VP logistics at competitive programming club, ICPC 2023 Contestant

TECHNICAL SKILLS

Programming Languages: Python, JavaScript/TypeScript, Rust, Java, C, C++, Go, Haskell, Ruby
Frameworks/Development Tools: SQL, NoSQL, React.js, Redux, Spring Boot, FastAPI, Flask, GraphQL, RESTful API, Docker, MongoDB, Neo4j, CI/CD pipeline, gRPC
Other Technologies: AWS, MicroSoft Azure, Git, Linux/Unix, IDEs, Postman, Distributed Systems

WORK EXPERIENCE

TD Securities *May 2023 - Dec. 2023*
Full Stack Software Developer *Toronto, ON, Canada*
- Took on large responsibilities as **the lead developer** in **front-end** development throughout the term.
- Led a team initiative to adopt **Test Driven Development (TDD)**, increasing codebase test coverage from 30% to 95% and reducing bug reports by 40%.
- Developed 10+ consumer-facing front-end pages using **TypeScript** with **React** and **AgGrid**, resulting in a 25% increase in user engagement and a 15% reduction in page load times.
- Implemented a backend data cache using **Liquibase** with **MSSQL**, improved service reliability by 30%.

TD Securities *May 2022 - Aug. 2022*
Full Stack Software Developer *Toronto, ON, Canada*
- Designed and developed a graph database migration POC using **Spring Boot** and **Neo4j**, demonstrating a 40% improvement in query performance for complex relationship data.
- Developed 20+ **REST API**s using **FastAPI** and **MongoDB**, used by 500+ TD Securities traders, leading to a 20% increase in trading efficiency and a 15% reduction in data retrieval time.
- Developed a trading reports generation tool using **Elixir** and **GraphQL** for the TD trading platform.

Caseware International *May 2021 - Apr. 2022*
Software Developer in Test *Toronto, ON, Canada*
- Developed a system validating parquet files extracted from **AWS S3** against CSV files from API endpoints, increased testing efficiency by 30%.
- Worked on building a Fintech Business Intelligence **Microservice** in **Spring Boot**, used by 2,000+ clients.
- Developed 20+ End-to-End UI automation tests with **Cypress.io** for production release test.
- Designed and developed 10+ **CI/CD** pipelines in **GitHub Actions** for **Software Development Life Cycle**.

McMaster University *Sep. 2022 - Apr. 2024*
Teaching Assistant: Compliers, Concurrent System, Intro to OOP *Hamilton, ON, Canada*
- Collaborated with other teaching assistants and helped total 500+ students to understand CS materials.

OTHER INTERESTS

- **Interests:** Snowboarding (Level 2 & Park 1 Professional Instructor), Ping-Pong, Reading