DAVID ZHANG

zdavid.zhang@mail.utoronto.ca ◇ zdavid4525.github.io ◇ linkedin.com/in/zdavidzhang/

EDUCATION

University of Toronto — Sept. 2022 – May 2026
BSc. Computer Science, Statistics Minor — **cGPA: 3.8/4.0**

Relevant Coursework Algorithm Design & Analysis (**A+**), Theory of Computation (**A+**), Operating Systems (**A+**), Artificial Intelligence (**A+**), Programming Language Theory (**A+**), Software Design (**A+**)

SKILLS

Languages Python, Java, C/C++, MATLAB, JavaScript/TypeScript, SQL, Bash, R, HTML/CSS

Technologies Spring, Express.js, Node.js, MongoDB, MySQL, PostgreSQL, React, Angular, Linux, Git, Docker

WORK EXPERIENCE

University of Toronto, Department of Computer Science — Jun. 2025 – Present
Undergraduate Researcher — Toronto, ON
- Experimental analysis of online scheduling algorithms, supervised by Allan Borodin

Teaching Assistant — Sept. 2024 – May 2025
- CSC384 Artificial Intelligence: Graded assignments on CSPs, KR, & Bayesian statistics
- CSC236 Theory of Computation: Taught tutorials on algorithm correctness, complexity & automata
- CSC207 Software Engineering: Led labs on **Java** OOP, SOLID & software architecture

Undergraduate Researcher — May 2024 – Aug. 2024
- Developed a **React** & **Python** web application ⧉ for neural machine translation across high- & low-resource languages

CIBC Capital Markets — May 2024 – Aug. 2024
Software Engineer Intern — Toronto, ON
- Developed a **Java Spring** stateless 2FA service authenticating **5k remittances/day** for Azure services
- Decommissioned a **MySQL** database used for transient session management, freeing **3 VMs** in production by migrating FX session contexts to a **MongoDB** cache
- Integrated **Bash** script to a **CI/CD** pipeline to auto-generate & deploy API docs to GitHub Pages on code commits

Software Engineer Intern — May 2023 – Aug. 2023
- Designed API architecture for a VISA integration to triple remittance options, helping drive a **2M USD/mo.** money movement increase
- Resolved a E2E **Spring** cookie vulnerability using **TypeScript** & **Java**, safeguarding **20 million** card numbers by building a robust session invalidation API
- Optimized in-memory caching & eviction for metadata, reducing request execution time from **200ms** to **4ms**

Stealth — Jan. 2023 – Mar. 2023
Software Engineer Intern — Toronto, ON
- Increased throughput & compute resources by **40%** with **JavaScript** through query indexing & **Node.js** clustering
- Developed a Slack notification service for real-time incident alerts with **Express.js** & **MongoDB**, increasing timely completion of vulnerability tickets by **24%**

PROJECTS

Automated Trading System | *C++, MATLAB, Python*
- Intraday equity arbitrage & trend-following

Advanced Data Structures & Algorithms Repository ⧉
- Solutions to select problems from *CLRS* & MIT's *6.854 Advanced Algorithms* problem sets

HTTP Web Server | *C++*
- Multithreaded web server using **C++** with a fixed-size worker thread pool to handle concurrent HTTP requests

MISCELLANEOUS

Achievements Trinity College Peter Larkin Scholarship, Trinity College Drew Thompson Scholarship