

Asad Mirza

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Education

University of Toronto

Computer Science (BSc) - **3.70 cGPA**

2023 – 2027

Toronto, ON

- **Awards:** Dean's List, Presidents Scholarship Award valued at \$7500 for academic excellence
- **Relevant Courses:** Software Design, Systems Programming, Computer Organization, DSA, Linear Algebra I-II, Calc I-III

Skills

Programming: JavaScript, TypeScript, Python, Java, C, SQL, Ruby, HTML, CSS, Bash

Frameworks/Libraries: React, Node.js, Express, Flask, Ruby on Rails, GraphQL, React Query, MUI, WXT, Chrome API

Developer Tools/Testing: RSpec, Jest, Pytest, Git, Linux, Jira, Docker, AWS EC2, CI/CD, Pipelines,

Practices: Object Oriented Design, REST, SOLID, Agile/Scrum, Distributed Computing, Networking Fundamentals(TCP), AdTech

Software Engineering Experience

Returning Software Engineer Intern

September 2025 - Present

StackAdapt - Measurements Team

Toronto, ON

- Shipped multiple **scalable** analytics & observability **features/fixes** for an **AdTech** platform serving **2,000+** advertisers handling **large-scale** workflow data (**React, TypeScript, Rails, GraphQL, Docker**).

Software Engineer Intern

January 2025 – April 2025

StackAdapt - Measurements Team

Toronto, ON

- Led the **end-to-end design** and **launch** of a **full-stack** deletion pipeline, cutting **95%** of repetitive on-call work and **preventing** unintended **charges** for **2,000+** advertisers, directly safeguarding **company revenue** (**GraphQL, Rails, React Query**).
- Refactored an old dropdown table with **SOLID** principles, supporting customizable props and replacing **1,000+ LoC**; now the **primary** UI for upcoming ABM studies impacting **2000+** clients.
- Wrote requirements-driven **black-box RSpec & Jest** suites for every feature shipped, keeping code above **90%** coverage and catching multiple **pre-merge regressions**.

Software Developer Intern

November 2024 – January 2025

Saige

Remote

- Developed new **searching** & optimized **web scraping** features for a data analytics real estate platform for agents that houses **thousands** of properties, leading to a **27% higher** client conversion rate (**React, Python, Flask, MySQL**).
- Modularized real estate **filtering** code by abstracting shared logic into reusable classes, accelerating related feature development from **days** to just **hours** (**React, Flask**).
- Optimized real estate **data pipeline** code by developing a **VPN** switcher on **AWS EC2** that increased throughput by **500%** to deliver **fresher** metrics to users (**Python, EC2**).

Leadership/Research Experience

Teaching Assistant – Intro to Computer Science I

September 2024 – Present

University of Toronto

Toronto, ON

- Selected by Professor Gawde from **200+** applicants to help teach **600+** first-year students **Python** and **CS** fundamentals; took initiative to **support** students individually, **resulting** in multiple requests for personal office hours.

Research Associate

March 2024 – January 2025

University of Toronto – Professor Brian Harrington

Remote

- Co-authored and submitted "A Systematic Literature Mapping of Early Generative AI Research in CS Education" to **SIGCSE 2025**, conducting comprehensive analysis of **LLM** applications in **computer science pedagogy**.
- Presented research findings at academic seminars with faculty and grad students to refine methodology and interpretations.

Projects

Thumbmarks | [Source Code](#)

- **Engineered** a **full-stack** Chrome extension to solve a **personal pain point** in web browsing, building a **visual bookmarking** system on **WXT** and **React** with a **Supabase** backend, and securing user data via **Row-Level Security (RLS)**.

Carbon Emissions Dashboard | [Source Code](#)

- Built an **Android** app in **Java** with **CRUD** operations, push notifications, and carbon footprint **visualization** backed by **Firebase**.

Multiplayer Online Asynchronous Battleship | [Source Code](#)

- Built a scalable multiplayer Battleship server in **C** using **epoll** for **I/O** multiplexing and signal handling for concurrent connections.