AARON SHAH

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EDUCATION

Honours Bachelor of Science (HBSc), University of Toronto   2021 - 2026
Major in Mathematical Sciences, Minor in Computer Science and Philosophy of Science

SKILLS

Soft Skills	Communication, Problem-Solving, Project Management,
Programming Languages	C, C++, Java, JavaScript, Lua, Python, RISC-V, TypeScript, x86asm
Technical Environments & Tools	Agile, PyObjC, Git, NodeJS, OpenAI, Selenium, Unix, Win32

PROFESSIONAL EXPERIENCE

Machine Learning Engineer Intern   May 2023 - September 2023
MLDSAI Inc.   *Toronto, ON (Hybrid)*

- Developed **over 25 features** such as a fully functional **user-interface, data visualization tools**, and general improvements for **OpenAdapt: AI-First Process Automation with Transformers.**
- Increased **object serialization** speed by over **300%** by analyzing and optimizing the codebase, resulting in more efficient data collection and processing.
- Worked with various **Apple's** low-level frameworks such as **Foundation**, **Quartz**, and **ApplicationServices** to provide a seamless user experience on **macOS**.
- Utilized **Transformers** and **OpenAI** to provide state-of-the-art performance on a variety of **NLP tasks** including **image analysis** and **text classification.**

Contract Software Developer   May 2023 - September 2023
Nosso   *Toronto, ON (Remote)*

- Collaborated closely with the development team in the creation of a **full-stack web application** connecting senior citizens with caretakers, providing consultation and mentorship throughout the development lifecycle.
- Designed the UI on **Figma**, for a **modern** and **intuitive** user experience built with seniors in mind.
- Influenced the architectural decisions, guiding the team to employ **NextJS**, **NodeJS**, **TypeScript**, **Clerk**, **PostgreSQL**, and **Prisma**, resulting in a **scalable** and **efficient** web application.

PERSONAL PROJECTS

DS3DebugFPS (C/Assembly | Win32): Developed a custom **Direct3D** wrapper that directly modifies the memory of a popular video game during runtime, resulting in a **significant** improvement in frame rates and overall performance. Successfully maintained the modification using collected feedback, with over **50,000** users (2023).

dent (C++ | SDL2): Created a highly efficient and portable **CHIP-8 interpreter** that enables seamless emulation of a wide range of classic arcade games, including popular titles like Breakout and Pong.

boggers (Java | JavaFX): Developed a feature-rich, fully-functional version of the classic word game Boggle, complete with a visually appealing and user-friendly graphical interface. Adhered to **SOLID design** principles and employed **Agile** development methodologies in a collaborative, scrum team setting to deliver an outstanding end-product.

zero (C++ | Win32): Created a lightweight yet powerful **disassembler** that allows for the disassembly of code at specific memory addresses by utilizing the **Windows** iDebugControl interface. Provides an intuitive and efficient way of analyzing low-level code.

CERTIFICATIONS

Data Science Methodology - IBM (April 2023) · Machine Learning with Python - IBM (April 2023) · Mathematical Optimization for Business Problems - IBM (April 2023)