Talal Ahmad

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EDUCATION

Wilfrid Laurier University | *Honours BSc in Computer Science and Business Administration*   Sep 2022 - Apr 2026
- **GPA**: 3.8/4.0 (Dean's List)
- **Relevant Coursework:** Data Structures, Algorithms, Object-oriented programming, Databases, Operating Systems, Discrete Mathematics, Statistics, Microeconomics, Macroeconomics, Law

SKILLS

Languages: JavaScript, TypeScript, Go, SQL, Python, C++, C, Java, Lua, VBA, HTML/CSS
Frameworks/Libraries: Node.js, React.js, LangGraph, LangChain, Express.js, FastAPI, Next.js, Drizzle, Pandas, Selenium
Tools: Linux, Git, Bash, Docker, Cloudflare Workers, Amazon Web Services (AWS), Github Actions, GCP, Linear

EXPERIENCE

PipeRich | *Software Engineer Intern - Waterloo, ON, CA*   Jan 2025 – April 2025
- Delivered an automated email responder service deployed on **GCP** with **Docker**, handling **1,000+** emails per week using **LangGraph**, **Python**, and **Postmark**, with Slack and Twilio integrations for real-time alerts.
- Cut infra costs by **4x** by migrating a cloud contact form agent to a self-hosted setup on **GCP** using **Docker Compose**, and custom browser-workers and LLMs, while maintaining support for **4,000+** monthly form submissions.
- Improved lead capture and conversion by designing a responsive marketing site with **Next.js**, **Typescript**, **Tailwind CSS** (shadcn/ui) and deploying a custom contact form powered **Cloudflare Workers & Pages**.

StartUp Lab Laurier | *Software Engineer Intern - Waterloo, ON, CA*   Jan 2025 – April 2025
- Improved product development velocity for **8+** early-stage startups by delivering technical consultations resulting in faster **MVP** launches and clearer engineering roadmaps.
- Shipped an MVP resume analyzer for an HR startup with **Typescript**, **Mistral OCR**, **GPT-4o**, and **React** with real-time markdown feedback—tested with **10+** early users for validation.
- Designed and built a multi-tenant CRM platform for Montessori schools using **Next.js**, **Vercel** and **Supabase** with support for registration and billing, with demos planned for **5 schools** across Ontario.

Wilfrid Laurier University | *Undergrad Instructional Assistant - Waterloo, ON, CA*   Sep 2024 – Present
- Support over **100+** students in **CP213** (Object-Oriented Programming) and **CP263** (Data Structures in C) by explaining object-oriented principles, data structures, and debugging techniques.

Yamaha Motors Canada | *Data Enginer Intern - Toronto, ON, CA*   May 2024 – Aug 2024
- Reduced error-checking time by **80%** by developing web-scraping apps using **Python**, **Selenium**, and **Pandas** to detect discrepancies between the backend and frontend consumer website.
- Enhanced data integrity and reduced time-to-market by **50%** by developing **Python**, **Pandas**, and **VBA** scripts to convert parts and accessory data across formats, improving data comparability and availability.
- Reduced project downtime by **15%** by performing ad-hoc **SQL** queries to retrieve critical data, supporting **10+** members of the customer experience team.

PROJECTS

Politicate (Winner @ Hack Canada 2025) | *Typescript, Next.js, Python, FastAPI, Langchain, PostgreSQL*   ⓞ
- Developed a full-stack political education platform that delivers real-time Canadian political news and policy insights, winning the **Google API** Track against **200+** teams
- Made use of **GPT-4o**, **LangChain**, and Google Programmable Search engine to summarize, scrape, and personalize recent polices and hosted the data on Restful **FastAPI** endpoints.

Monkeylang Interpreter | *Go*   ⓞ
- Developed an interpreter for a JavaScript-like programming language in **Go**, implementing a lexer, AST, parser, and evaluator, with support for features like **higher-order functions**, **closures**, and data structures such as arrays, strings, and hashmaps.

Reinact.js | *Javascript, Node.js*   ⓞ
- Engineered a lightweight **React-like** framework leveraging a **virtual DOM** and a custom **reconciliation algorithm** for efficient DOM updates