

# Bader Aljabri

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## Technical Skills

Languages: Java • C • JavaScript • Bash • TypeScript • HTML/CSS • Racket • Python • C++

Tools/Technologies: MCPs • Docker • NodeJS • Git • Cursor • React • Shell Scripting • Puppeteer

## Education

### University of Waterloo & Wilfrid Laurier University

2024 – 2029

BCS/BBA Bachelor of Computer Science & Bachelor of Business Administration, Co-op Program (Double Degree)

**Relevant Coursework:** Data Structures • Algorithm Design • Software Development • Functional Programming

**Awards:** President's Gold Scholarship (\$4,000/yr - \$20,000) **95%+** Average

## Projects

### Tile To Pattern | Canva Application (NodeJS, Typescript)

APR 2025

- Built a Canva application that produces editable patterns given a tile-able image, making use of **Git** for **collaboration**.
- Accelerated production by utilizing tools **Agentic tools** like v0 and Cursor combined with **MCPs** including Canva's Dev MCP, **improving efficiency** by over **500%** compared to previous projects (PlotitAi).

### Manual Memory Management | Malloc/Realloc

MAR 2025

- Implemented **manual heap** management using **doubly linked** control nodes, transforming a lone malloc call into a **reusable chunk of memory** (capable of handling all data types), allowing more control of memory use at a given time.
- Optimized** allocation searching and memory management by utilizing **balanced BSTs** to store **node pointers** as encountered to locate most appropriate gaps, ensuring deterministic  **$O(\log n)$  worst-case** search with earlier implementations being less efficient with respect to both **speed and memory management**.

### PlotitAi | Canva Application (Canva AI and Integrations Hackathon)

AUG 2024

- Developed a Canva app that allows users to upload **CSV files** and receive relevant **AI Generated** editable graphs, enabling non-technical users to quickly visualize and customize their data for analysis and presentations.
- Utilized VS Code's **Claude** extensions powered by **Sonnet 3.5** to start and finalize the app in only **two weeks**.

## Experience

### Patterned AI | Software Engineer Intern

2024 - Present

- Built a sitemap driven **scraping & filtering pipeline** (utilizing Puppeteer) that curated over **150k images**, and detected seamless tiles by applying edge adjacency checks into grayscale versions of the images, **supplying clean training data** for the AI; **Optimized** to process **10 images per instance**, with fail-safe mechanisms, boosting throughput by **1,000%** and cutting failures by **95%**.
- Developed and shipped Canva apps with the goal of expanding the reach and product offerings of the company, including the beforementioned apps along with an **SVG based animated pattern generator**.

### MAC Alhuda Schools | Volunteer

2019 - 2023

- Volunteered at a weekend school for **over 4 years**, handling various tasks including but limited to general morning setups, teacher assisting, and various front **office duties**, consisting of **organization** and **planning** tasks.
- Illustrated a **high level of adaptability** by pivoting between **last-minute** classroom support, front-office coordination, and facility setup ensuring that everything kept running smoothly for **400+ students and staff**.
- Built upon my **communication** and **interpersonal** skills through various interactions with a range of **different types of people**, including 4 year olds, teachers, parents, and staff members.

## Certifications & Awards

- PEO High School **Coding Contest** – (**1<sup>st</sup> Place**) (2<sup>nd</sup> Place in the 2022 contest) **NOV 2023**
- Canadian Computing Competition – Senior (**Top of school**) **FEB 2024**
- Career Development Certificate – (Wilfrid Laurier University) **MAR 2025**
- PEO Mathletics Competition – (**1<sup>st</sup> Place**) **NOV 2019**