

HAMZAH JARRAR

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EDUCATION

Bachelor of Computing, Software Engineering (Co-op) | 2025 - Present

University of Guelph, Guelph, ON

- Maintaining an 89% average (4.0 GPA)

TECHNICAL SKILLS

Programming Languages: Python, TypeScript, JavaScript, Java, C, C#, SQL, HTML, CSS, R

Frontend: React 19, Vite, responsive design, vanilla JS/DOM

Backend & Databases: FastAPI, PostgreSQL, SQLAlchemy, Alembic, REST APIs, JWT authentication

Tools & Platforms: Git, GitHub, GitLab, Node.js, .NET (Windows Forms), Chrome Extension Development (Manifest V3), VS Code, Visual Studio, Eclipse

Concepts: Full-Stack Development, Object-Oriented Programming, REST API Design, Database Design, Manual Memory Management

PROJECTS

Replay | Jul 2026 – Aug 2026 | [GitHub](#)

- Built a local AI conversation manager for saving, organizing, and searching past chats
- Architected the three-part system: React/TypeScript app, FastAPI backend, and Chrome extension
- Designed the relational data layer with SQLAlchemy models and Alembic schema migrations
- Implemented authentication with JWT tokens and Argon2 hashing in a local-only data model
- Built asynchronous background imports with status polling to load large exports smoothly
- Wrote a resilient export parser handling tree traversal, Unicode cleanup, and malformed export files
- Integrated the OpenAI API to auto-generate conversation titles through an extensible provider layer

Flowestra | Google Developer Groups 24-Hour Hackathon | May 2026 | [GitHub](#) | [Demo](#)

- Built a gamified academic planner as a 3-person team; placed 4th of 49 teams
- Built the FastAPI backend: SQLAlchemy models, CRUD layer, and dashboard API
- Extended the data model and API to connect the game layer to the quest dashboard
- Implemented Brightspace syncing that turns course deadlines into prioritized XP quests
- Implemented token-based authentication and protected routes across the dashboard API

Portfolio Website | Aug 2026 | [GitHub](#) | [Live](#)

- Designed a responsive single-page portfolio in HTML, CSS, and vanilla JavaScript with no frameworks
- Built a data-driven project rendering system with tag-based filtering and expandable detail views
- Implemented scroll-triggered reveals, scrollspy navigation, and a slide-in mobile drawer menu
- Built the About, Projects, Skills, and Contact sections from a single content data source

Minesweeper | May 2025 – Jun 2025 | [GitHub](#)

- Developed a graphical Minesweeper game in Java, separating game logic from UI with OOP design
- Implemented flagging, easy/hard difficulty settings, and new-game support
- Built a recursive flood-fill reveal for empty cells and a mine-adjacency counting system

C Systems Programming | 2025 – Present

- Built a C system converting CSV records into a validated binary archive with restore
- Implemented a singly linked list with node removal, recursive traversal, and full teardown
- Implemented and benchmarked sorting and searching algorithms with clock() timing

Turn-Based Battle Game | Jun 2024 | [GitHub](#)

- Built a turn-based Java battle game with class-based character stats and combat logic
- Designed class hierarchies and managed game state across turns using OOP principles

WORK EXPERIENCE

Waiter/Cashier/Busser, Nandos | June 2026 - Present

- Managed multiple tasks in a fast-paced environment while maintaining accuracy and detail
- Communicated clearly with customers and staff to resolve issues and keep service consistent