

AMIR HASRATI

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EDUCATION

University of Guelph

Honours Bachelor of Computing (Computer Science Major), Co-op

Sep 2022 – May 2027

Guelph, Ontario

TECHNICAL SKILLS

Languages: C, TypeScript, C#, Python, JavaScript, Java, SQL, C++

Frameworks/Tools: Next.js, NestJS, React, React Router, Node.js, Tailwind CSS, Docker, Git, Vite, MCP, Raspberry Pi

Databases/ORMs: MongoDB, MySQL, PostgreSQL, SQLite, Supabase, Drizzle

EXPERIENCE

Software Engineer Intern

Picton Investments

Jan 2026 – Aug 2026

Toronto, Ontario

- Engineered and shipped TypeScript and NestJS MCP servers that transformed core product workflows into standardized AI-callable tools, enabling users to access application functionality conversationally through Claude and other AI clients.
- Designed and developed a React and Next.js internal dashboard and supporting REST APIs, enabling teams to manage app instances and product configuration through SQL-backed workflows.
- Partnered closely with UX on feature design, resolved bugs, and refactored shared code; also collaborated with the marketing team to deliver improvements to the company website.

Software Developer Intern

Descartes Systems Group

May 2025 – Aug 2025

Waterloo, Ontario

- Developed core features for a company-wide .NET Core Single Sign-On (SSO) validation application that automatically ensures web applications, APIs, and identity providers (IdPs) follow enterprise security requirements.
- Collaborated with the UX department to design and build UI components and refine user interaction flows, significantly improving developer experience and usability.

Software Developer Intern

Descartes Systems Group

Sep 2024 – Dec 2024

Waterloo, Ontario

- Engineered and maintained internal UI components, including interactive data visualization modules, enabling other teams to integrate analytics seamlessly into their applications.
- Contributed to a major migration initiative, porting an enterprise application from .NET Framework to .NET Core to modernize infrastructure, extend support, and improve performance.

Freelance Web Designer & Developer

Argentium Consulting

May 2023

Guelph, Ontario

- Redesigned and developed a client website using Remix and React, significantly improving the user interface and delivering a seamless user experience.
- Optimized website content to enhance SEO, adhering to Google's technical requirements and spam policies.

PROJECTS

🔗 **Revelio** | TypeScript, React Router, OpenAI, Docling, PostgreSQL, PDF.js

Apr 2026 – Present

- Developed an AI-powered research tool that helps users navigate dense technical papers by identifying key concepts and mathematical notation, then explaining them using context from the paper itself.
- Built a document-processing pipeline with PostgreSQL queues, automatic retries, and idempotency, allowing failed jobs to restart safely without duplicating work or corrupting results.
- Implemented an interactive PDF.js viewer with search, term highlighting, definition cards, and source navigation using React and TypeScript.

Digital Guitar Effects Pedal | C++, Raspberry Pi Pico 2, DSP, I²S

Aug 2026

- Built a Raspberry Pi Pico 2 guitar effects pedal that converts analogue audio to digital with an external ADC, transfers samples over the I²S protocol, applies real-time DSP for delay, feedback, and wet/dry mixing, and outputs through a DAC.