# Camdyn Hamilton

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## Education

**York University**                                                                                   Sep 2022 – Jun 2026
*Bachelor of Science (Honours) in Computer Science*                                    *Toronto, ON, Canada*

## Work Experience

**Full-Stack Developer Co-op**                                                               May 2025 – Aug 2025
*Royal Bank of Canada (RBC) - Borealis, Project Data Platform as a Service Team*        *Toronto, ON, Canada*

- **Performance Optimization:** Advised backend team on endpoint improvements that reduced loading time for critical frontend pages by **50%**.
- **High-Volume Rendering:** Engineered the display logic for **1M+ bank-wide events**, ensuring clean and performant UI rendering.
- **Full Stack Development:** Architected the core UI using **Angular** for the real-time event platform and developed scalable **Spring Boot + PostgreSQL** REST APIs.
- **Observability:** Enhanced engineering dashboards by adding filtering capabilities and incorporating graph libraries for advanced data visualization.

**Full-Stack Developer Co-op**                                                               Sep 2024 – Apr 2025
*Royal Bank of Canada (RBC) - Borealis, UX-Force Team*                                    *Toronto, ON, Canada*

- **ML Platform Impact:** Shipped **8+ production features** for approx. 1,500 advisors, enabling **$2M in cost savings** and a $277K revenue projection.
- **Backend Architecture:** Developed **FastAPI** endpoints to persist user-specific recommendations and built mock-data generators to accelerate developer testing.
- **Data Modeling:** Optimized **PostgreSQL** schemas for a microservice used by 100+ engineers daily, resolving column conflicts and preventing downstream workflow errors.
- **Frontend Engineering:** Built a Global Search interface using **Vue.js + TypeScript** to enable cross-dataset ML queries.
- **CI/CD & Testing:** Improved pipeline stability by creating comprehensive test suites using **Vitest, Playwright, and Pytest**.

## Personal Projects

**HarmonAI - AI Vocal Coach** | *Vue.js, TypeScript, Express, Google Gemini API, Monorepo*

- **High-Velocity Architecture:** Architected and shipped a full-stack multimodal AI application in a 12-hour sprint, utilizing a **TypeScript Monorepo** for scalable backend/frontend separation.
- **AI Integration:** Engineered a backend pipeline using **Gemini 1.5 Flash** to process audio inputs and generate real-time vocal feedback (timbre, pitch, and texture analysis).
- **Interactive UI:** Built a "Song Comparison" engine that benchmarks users against artist styles and an interactive pitch-visualization game using **Vue.js**.

**Hatsumai - AI Project Generator** | *Vue.js, TypeScript, Express, PostgreSQL, Knex, Docker, GPT-4o*

- Engineered a containerized backend using **Docker** and **Express**, implementing **JWT authentication** to secure user sessions and API endpoints.
- Integrated **GPT-4o** for dynamic content generation and utilized **Knex.js** to manage complex relational database schemas in **PostgreSQL**.

## Technical Skills

**Languages:** C, CSS, HTML, Java, JavaScript, Python, RISC-V, SQL, TypeScript, Verilog
**Frameworks & Libraries:** Angular, Express, FastAPI, Node.js, Playwright, React, Sass, Spring Boot, Vite, Vitest, Vue.js
**Tools & Databases:** Azure Data Studio, Bash, DataGrip, Docker, Git, GitHub, Google Analytics, MySQL, PostgreSQL, Unix/Linux
**Platforms & Services:** Render, Supabase

## Leadership and Teaching

**Teaching Assistant** | LE/EECS 2021 (Computer Organization)

- Led weekly labs for **25+** students on RISC-V/memory systems, graded assignments, and enforced academic integrity.