

Michael Banna

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EDUCATION

Polytechnique Montreal

Bachelor of Engineering in Software Engineering

Montreal, QC

Aug. 2021 – May 2025

The University of British Columbia

Exchange Semester in Computer Engineering

Vancouver, BC

Sep. 2023 – Dec. 2023

EXPERIENCE

iPadOS Developer (Capstone Project)

Jan. 2025 – Apr. 2025

Vis Fitness Inc. | Swift, SwiftUI, SwiftData, gRPC

Montreal, QC

- Built a native iPadOS application in collaboration with a fitness tech startup, enabling professionals to design parametric workout programs through a polished and responsive interface.
- Implemented adaptive UI components for browsing and editing program structures, ensuring a fluid and accessible user experience consistent with Apple's **Human Interface Guidelines**.
- Integrated local data persistence with **SwiftData** and **gRPC**-based synchronization with the existing web platform, including support for image and video uploads via **Cloudflare**.

Software Developer Intern

Sep. 2024 – Dec. 2024

Genetec Inc. | Angular, TypeScript, C#, Azure DevOps

Montreal, QC

- Developed and maintained production-ready features for Genetec's flagship security platform, collaborating with a multidisciplinary team in a large-scale enterprise codebase.
- Enhanced UX in core reporting and alert modules by implementing column reordering, sorting, and contextual information features, improving usability and aligning with existing design systems and legacy parity goals.
- Wrote and executed unit and end-to-end tests to ensure feature robustness and stability, using virtualized environments to test against proprietary backends and validate integration with analytics pipelines.

Web Developer Intern

June 2023 – Dec. 2023

Fastercom Inc. | React, TypeScript, Storybook

Montreal, QC

- Built custom UI components including a signature capture field, image uploader with compression and preview, and a smart icon search dropdown, improving UX and reducing reliance on external libraries.
- Wrote internal documentation for onboarding and tooling, and explored telemetry and mobile support options using cross-platform frameworks like **Capacitor**.
- Enhanced frontend performance and contributed to design system maintenance in **Storybook** while collaborating closely with developers and product managers.

PROJECTS

Barricade: Concert Memory App | Swift, SwiftUI, SwiftData, ShazamKit, AVKit | 🎧

Apr. 2025

- Developed a full-featured iOS app that transforms concert videos into organized memories with automatic song detection, custom color themes, and intuitive navigation based on hand-crafted **Figma** prototypes.
- Engineered a performant persistence layer with **SwiftData** featuring schema migration support, providing robust storage for concert data, setlists, and video references while enabling complex filtering across multiple dimensions.
- Implemented advanced media handling using **AVKit** and **ShazamKit**, creating a seamless pipeline that processes concert footage, identifies songs in real-time, and generates interactive setlists with minimal user intervention.

7Down: Find-The-Difference Game | TypeScript, Angular, Node.js, Express, Firebase, Flutter | 🎮

Apr. 2024

- Developed a cross-platform multiplayer image comparison game with seamless web/Android cross-play using **Angular**, **TypeScript**, and **Flutter**.
- Implemented real-time gameplay with **Socket.IO** and integrated **Firebase** for authentication & data persistence.
- Engineered a flood-fill algorithm for accurate difference detection with drawing tools for game image creation.

RouteRider: Friend Commuting App | Java, Espresso, JavaScript, Node.js, Azure | 🚗

Nov. 2023

- Built a feature-rich Android app integrating **Google Sign-In**, **Maps**, and **Calendar**, with dynamic tab navigation and a responsive, user-centric UI.
- Developed a **Node.js** backend with **Express** and **MongoDB**, implementing algorithms for optimal public transit routing and user matching for collaborative commuting.
- Led frontend design and automated UI testing using **Espresso**, ensuring functionality met both functional and non-functional software requirements.