

Cade McNelly

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EDUCATION

University of Toronto

Honors BSc in Computer Science GPA: 4.0

Toronto, ON

Sept. 2025 – Present

Joanne Cardinal Schubert High School

Grade 12 GPA: 97%

Calgary, AB

Sept. 2022 – June 2025

EXPERIENCE

Avionics Software Engineer

2025 – Present

University of Toronto Student Team for Amateur Rocketry (UofT STAR) – Rocketry

Toronto, ON

- Designed and implemented embedded avionics software and hardware integrated into a 1.5-meter rocket
- Developed multi-sensor data acquisition pipelines to capture and log flight telemetry in real time for post-flight analysis
- Contributed to VTOL capability research by analyzing flight data to inform future autonomous landing and control systems

Robotics Competitor & Software Developer

2019 – Present

Skills Alberta & FIRST Tech Challenge (FTC)

Alberta, Canada

- Designed, built, and programmed competition robots with autonomous routines, sensor integration, and real-time control logic
- Collaborated in team-based engineering environments with iterative testing under competition deadlines

Lifeguard & Swim Instructor

2023 – Present

YMCA Calgary

Alberta, Canada

- Maintained communication with guard team to ensure pool safety and follow protocol during emergencies.
- Taught people of all ages about water safety and how to conduct themselves in aquatic environments.

PROJECTS

Advocate – AI Legal Advisor | Python, Claude API, Neural Networks, NLP, React

- Parses legal documents using two specialized neural networks for clause classification and risk assessment
- Integrates the Claude API to evaluate the viability of legal strategies against a dataset of 60,000 Supreme Court cases and generates automated attack trees for navigating claims and denials without legal representation
- Features an AI chatbot interface and document creation pipeline for legal correspondence and demand letters

NexaCare – Healthcare Benefits Platform | Swift, React, Firebase, Node.js, REST APIs

- B2C and B2B platform linking Google, Outlook, and Apple Calendar to benefits accounts; consolidates coverage across providers, family members, and employer roles with automatic scheduling and push notification check-ins
- B2B employer portal with role-based access control enabling HR teams to manage employee accounts, track provider status, and monitor utilization across multiple providers and benefit tiers

Quantlyze – AI Market Prediction Engine | Python, PyTorch, C++, WebSockets, React

- Ingests real-time market data and organizes live order flow into structured order book trees processed through an event-timeline layer and neural network trained to identify price shift patterns
- Models liquidity depth, volume profile, and bid-ask spread dynamics across equities, crypto, and commodities, generalizing to any tradable asset class

NuYu – iOS Productivity App | Swift, SwiftUI, Firebase

- Full-featured productivity app tracking tasks, workouts, meals, and study sessions with MVVM architecture, custom SwiftUI components, and Firebase for authentication and real-time cloud sync

TECHNICAL SKILLS

Languages: Python, C++, Swift, Java, SQL, JavaScript, HTML/CSS

Frameworks: PyTorch, SwiftUI, Firebase, Flask, React, Node.js

Tools: Git, GitHub, Xcode, VS Code, IntelliJ, Docker

Concepts: Neural Networks, NLP, Algorithms, Linear Algebra, Embedded Systems, Software Architecture