# NATHAN DANIEL

# Education

Queen's University | Candidate for B.A.Sc. Computer Engineering

Sep  $2021 - \exp$ . Apr 2026

- Recipient of Dean's Scholar 2024-2025: Combined Fall and Winter GPA of 3.5 or higher
- Recipient of Betty Harrison Award for Black Canadian Students (2021-2025)

# Experience & Leadership

#### **Educational Technology Intern**

May 2024 - Aug 2024

Queen's University Department of Health Sciences - OPDES

Kingston, ON

- Developed interactive modules for 370+ Queen's students using HTML, CSS, JavaScript, and Articulate 360.
- Automated repetitive content, reducing module development time and improving consistency across projects.
- Collaborated with faculty to implement code-based features that enhanced engagement and met academic standards.

### Software Engineering Lead

Dec 2024 - Feb 2025

Queen's University Cybersecurity and Crytography Club (Q3C)

Kingston, ON

- Led team to develop an encrypted Chrome extension password manager.
- Developed the backend using Node.js and Express, implementing RSA encryption for credential storage and retrieval.
- Coordinated team workflows, managed feature planning, and ensured compliance with Chrome Extension APIs.

### **Projects**

Clinical.AI | Express, Flask, MongoDB, Node.js, Python, React, TypeScript

June 2025

- Led the development of a MERN-based application to assist nurses in making faster patient care decisions.
- Built a responsive, user-friendly frontend using TypeScript and React, modeled after real hospital workflows.
- Developed the backend with Node.js and Express, with a separate Flask-based service for machine learning predictions.
- Integrated scikit-learn models (logistic regression/random forest) to evaluate patient risk levels based on clinical data.

**qRate** | HTML/CSS, JavaScript, React, Next.js, Node.js, Express, MongoDB

March 2025 – Present

- Developed a full-stack course review platform for Queen's students, displaying course and professor feedback.
- Built a dynamic front-end using React and Next.js, ensuring mobile responsiveness and intuitive navigation.
- Implemented REST API endpoints with Node is and Express to interact with the client and MongoDB database.
- Deployed frontend and backend to Google Cloud Platform, integrating cloud services for scalable hosting.

FantasyHoopz | Java, Spring Boot, PostgreSQL, HTML/CSS, JavaScript

Aug - Oct 2024

- Full-stack fantasy basketball application that displays data for 650+ players and 160+ teams.
- Developed a front end using HTML, CSS, and JavaScript to see statistics and see responsive filtering.
- Implemented an Java backend using Spring Boot to serve RESTful endpoints and manage database interactions.
- Optimized PostgreSQL queries by designing efficient database schema, reducing query response time by 25%.
- Deployed the web client using Google Firebase.

#### Reddit to Redshift Data Pipeline | Python, Airflow, Celery, AWS, PostgreSQL, Redshift

May 2025

- Built a data pipeline to collect Reddit data using the Reddit API, automating ingestion with Airflow and Celery.
- Containerized the Airflow and Celery workflow using Docker, enabling isolated, reproducible environments.
- Stored and organized raw and processed data in Amazon S3, then cataloged it with AWS Glue for scalable querying.
- Used Amazon Athena to analyze trends in the data, and loaded results into Amazon Redshift to power downstream analytics dashboards.

#### Technical Skills

Languages: C, C++, CSS, HTML, Java, Python, JavaScript, PHP, SQL, TypeScript

Frameworks: Apache Airflow, CUDA, Express, Flask, React, Next.js, Node.js, Spring Boot, Google Cloud Platform

Databases & Cloud: PostgreSQL, MongoDB, MySQL, SQLite, AWS (S3, Redshift, Glue, Athena), Docker

Developer Tools: Git, Gradle, VSCode, Visual Studio, PyCharm, IntelliJ, Linux, Eclipse