

Nathan Daniel

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EDUCATION

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

Sep 2021 – exp. Apr 2026

- Recipient of Betty Harrison Awards for Black Canadian Students (2021-2024)
- Relevant coursework: Algorithms, Computer Architecture, Data Structures, Microprocessor Interfacing & Embedded Systems, Object Oriented Programming, Data Science, Operating Systems, Probability, Electronics

TECHNICAL SKILLS

- **Programming Languages:** C, C++, CSS, HTML, Java, JS, Python, SQL
- **Developer Tools:** Altera Quartus Prime, Git, GitHub, React, Spring Boot, Ubuntu, VSCode, XML
- **Boards & Tools:** Arduino Uno, Raspberry Pi, PCB Fabrication, Oscilloscope

EXPERIENCE

Educational Technology Intern

May 2024 – Sep 2024

Queen's University Department of Health Sciences - OPDES

- Worked with Articulate 360 to create interactive educational modules for 370+ health sciences students, enhancing their learning experience through assessment tools.
- Partnered with faculty, instructional designers, and content experts to ensure educational materials met academic standards and addressed students' learning needs effectively.
- Integrated coding elements to improve learning experience, utilizing HTML, CSS, and JavaScript.

Project Manager @ Q3C

Dec 2023 – Present

Queen's Cryptography and Cybersecurity Club

- Leading the development of an encrypted password manager in Java, overseeing project timelines, code reviews, and integration of security protocols.
- Handling API design and SQL database architecture, ensuring efficient data flow and encryption standards.
- Oversee back-end development, ensuring proper encryption methods are being utilized for user data (ex. RSA).

PROJECTS

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

Aug – Sep 2024

- Developed a full-stack NBA fantasy basketball website with data for 650+ players, ensuring seamless integration.
- Built an interactive front-end with HTML, CSS, and JS to present NBA stats and manage up to 500 daily requests
- Implemented a Spring Boot backend in Java to retrieve PostgreSQL data filtered by various factors (ex. teams).
- Optimized PostgreSQL queries by designing efficient database schema, reducing query response time by 25%.
- Deployed the front end using Google Firebase.

Athletic Movement Predicting Algorithm | *Python, NumPy, Pandas, Matplotlib*

Feb – Apr 2024

- Utilized Python and BeautifulSoup to web scrape movement data from multiple CSV files.
- Preprocessed and prepared datasets by conducting an 80/20 train-test split, ensuring robust training.
- Employed Pandas and NumPy to analyze and predict next movement actions based on previous patterns.
- Visualized movement trends and prediction outputs using Matplotlib

Guess Master | *Android Studio, Java, XML*

Jan – Apr 2024

- Independently designed and developed a birthday guessing game using Java in Android Studio
- Implemented functionality allowing users to change the entity to be guessed, awarding tickets based on difficulty level, and displaying additional information when guesses are correct.
- Leveraged XML to design an intuitive and visually appealing user interface, ensuring a seamless and enjoyable experience for players.