NORMAN BUI

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EDUCATION

Carleton University | *Bachelor of Computer Science (Honours), 3.9/4.0 GPA*   **Expected May 2026**

- Software Engineering Stream; Minor in Psychology
- Awards: Dean's Honours List, President's Scholars Scholarship, Chalmers Jack Mackenzie Scholarship
- Relevant Coursework: Design & Analysis of Algorithms, Discrete Structures II, Web Apps, Operating Systems, Object-Oriented Software Engineering, Statistics

EXPERIENCE

Health Canada | *Software Developer Intern - Emerging Approaches Unit*   **Sep 2023 - Present**

- Build a QSAR **machine learning** model with pandas, NumPy, and scikit-learn to **predict chemical toxicity**
- Use **data science** and SciPy to build a **data analysis pipeline** that analyzes features linked to estrogen activity

Department of National Defence | *Software Developer*   **June 2023 - Present**

- Build a bilingual chatbot with Flask and GPT-3.5 to **simulate conversation with a local document database**
- Implement an **NLP pipeline** using PyPDF2 and NLTK for semantic transformation of PDFs
- Incorporate **OpenAI** for high-dimensional embeddings, enhancing **contextual response relevance**
- Use **SQLite3** and **FAISS** for efficient storage and embedding retrieval, enabling **quick semantic text retrieval**

NAV Canada | *Software Engineer Intern - SIN Team*   **May 2023 - Aug 2023**

- Implemented optimized data mangement strategies using C++ and Qt Creator to **clear 60% of unneeded files** and **improve automated analysis solutions by 30%** in DataExtractor software
- Optimized and resolved bugs in IRIS software, resulting in **more stable and efficient software performance**
- Automated network configurations using **PowerShell**, reducing manual efforts and increasing overall setup speed
- Consolidated data from multiple spreadsheets using Power Query to create comprehensive spreadsheets

Correctional Service Canada | *Software Developer Intern - VAM Team*   **May 2022 - Apr 2023**

- Collaborated on **C#** software solutions for web applications, improving victim services delivery
- Improved front-end through accessibility testing and **JavaScript**, **HTML**, and **Web Experience Toolkit** adjustments
- Resolved document generation errors in **Dynamics 365**, reducing software downtime

PROJECTS

Spotify Dating App | *Swift, Xcode, Firebase, Spotify API*

- Developed an iOS app in Swift, allowing users to **match based on music preferences**
- Incorporated Firebase for user management, ensuring secure authentication and efficient **CRUD** operations
- Integrated the Spotify API, fetching user data to **improve profile customization**

SummaryBot | *HTML/CSS, JavaScript, Python, Express, OpenAI*

- Developed a chatbot using **NLP** and OpenAI to achieve **automated summarization**
- Enhanced user experience by creating a responsive web app using HTML/CSS, JavaScript, and Express
- Optimized **web scraping** by incorporating BeautifulSoup4, **extracting and preprocessing content** from websites
- Streamlined content processing by crafting a Python script to manage summarization logic and API interactions

OttFoodHelp | *Java, Firebase, Google Maps API, Android Studio*

- Developed an Android app in Java to showcase food banks and enable users to add new community fridges
- Integrated a Firebase database for seamless **CRUD** operations for community fridges within the embedded map
- Utilized the Google Maps API for marker placement and fetching directions to food banks

SKILLS

Languages: Python, Java, C, C++, C#, PowerShell, SQL, JavaScript, PHP, MS Power Query
Frameworks: Flask, React, Node.js, Express, LangChain, MongoDB, SQLite3, MySQL, Firebase, Bootstrap, WET
Libraries: pandas, NumPy, matplotlib, scikit-learn, FAISS, NLTK, NLP, spaCy, OpenAI, Sentence Transformers
Development Tools: Git, Jazz, Ubuntu, Agile Methodology, SDLC