NORMAN BUI

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EDUCATION

Carleton University | *Bachelor of Computer Science (Honours),* ***4.0/4.0 (A+) GPA*** Expected April 2026

- Coursework: DSA, Discrete Math & Structures, OS, OOP, Paradigms, WebDev, QA, HCI (UI/UX), DBMS, Statistical Modeling

EXPERIENCE

Electronic Arts (EA) | *Software Developer Intern* | *AI Agents, AI Automation* May 2025 - Aug 2025

- Investigated and analyzed LLM-powered game testing systems by conducting performance testing across multiple AI models and documenting cost optimization patterns, providing technical recommendations for Servo development roadmap
- Enhanced load testing authentication systems by debugging authentication failures and resolving test execution errors, improving overall test infrastructure reliability from **35% to 100%** success rate
- Updated load testing frameworks with new game features by integrating coverage for latest gameplay functionality and implementing fixes for various execution errors, ensuring accurate performance testing under high-traffic conditions

Autodesk | *Software Developer Intern* | *TypeScript, Java, GraphQL* Jan 2025 - Apr 2025

- Worked on Quicksilver, a major project for Autodesk's cloud-based CAD/CAM platform, Fusion
- Architected and implemented a data validation framework, establishing the foundation for all future missing data fixes while creating comprehensive documentation
- Developed an **O(n)** algorithm with intelligent concurrency controls to repair missing primary relationships, achieving **8x** throughput through optimized parallel processing
- Designed and deployed API endpoint integration with manufacturing workflows to automate validation and repair operations when detecting missing data, reducing production failures by proactively addressing data issues without manual intervention
- Implemented permission validation and error handling protocols, eliminating existing security vulnerabilities for sensitive data
- Refactored part number assignment system to handle various edge cases, support configuration-specific assignments, and maintain data persistence during status changes, improving flexibility for users and reducing errors
- Maintained **100% test coverage** across all code changes using Mocha, Chai, and Sinon, ensuring high code quality standards

Kongsberg Geospatial | *Software Developer Intern* | *C++, Qt, Python, GIS* May 2024 - Aug 2024

- Developed demo apps using TerraLens SDK as the sole developer on the Solutions Engineering team, successfully delivering custom solutions to major clients in aviation, defense, and government sectors
- Integrated LiDAR, WMTS, and S-57 data and optimized render pipeline to achieve **consistent 60+ FPS** with real-time object tracking, while implementing system monitoring (GPU, CPU, RAM) and modernizing Qt UI/UX
- Developed automated airspace classification framework, removing manual processing and standardizing data categorization
- Automated VFR and terrain data processing workflows, reducing aggregating time by more than **40%**

Health Canada | *Data Scientist Intern* | *Python, ML, NLP, ETL* Sep 2023 - Dec 2023

- Developed Python solutions for chemical assessment, leading to improved risk data aggregation and analysis
- Built random forest classifiers with pandas, NumPy, SciPy, and scikit-learn to accurately predict chemical toxicity
- Rebuilt organization-wide federated chemical search system using BeautifulSoup4 and lxml, implementing automated fault tolerance and rate limiting that increased query success rate by **20%**
- Architected scalable web scraping framework and implemented test-driven development practices using unittest framework, restoring chemical data source integration capability **by 113%** and achieving **100% test coverage**
- Engineered automated knowledge graph pipeline using Neo4j, CoreNLP, and Stanza to extract semantic triples from medical literature, reducing qualitative data processing time and work

NAV CANADA | *Software Developer Intern* | *C++, Qt, PowerShell, GIS* May 2023 - Aug 2023

- Developed C++ solutions for various ATC applications, resulting in improved performance and reliability
- Optimized data management algorithm for internal data tool, resulting in a **60% decrease** in storage utilization and **30% boost** in automated data analysis performance
- Resolved multiple bugs in ATC software, achieving an overall **improvement of 16%** in frame rate
- Automated network configurations with PowerShell, reducing manual work and setup time by **more than 95%**

PROJECTS

Obscure Coding Language RAG Systems | *Python, RAG, LangChain, FAISS, Sentence Transformers*

- Researched and developed RAG systems to answer obscure programming language queries **@ Bedarra Corporation**

SocialSaplings | *HTML/SCSS, JavaScript, Bootstrap, Node.js, Express.js, Firebase (Firestore, Auth)*

- Led cross-functional team to build a reforestation platform, resulting in **1st place @ KuriusHacks**
- Built tree species recommendation algorithm integrating various APIs to analyze user geodata for optimal planting
- Developed an interactive visualization dashboard using the Google Maps API to display real-time reforestation metrics and global environmental impact data

SKILLS

Languages: C/C++, Python, Java, C#, SQL, HTML/CSS, JavaScript, PHP, Gherkin | English, French, Vietnamese
Frameworks & Databases: Flask, Spring Boot, Express.js, MySQL, SQLite3, PostgreSQL, Firebase, MongoDB, Neo4J, JUnit, Selenium
Libraries: pandas, NumPy, matplotlib, scikit-learn, unittest, spaCy, Sentence Transformers, BS4, lxml, HuggingFace
Development Tools: Git, Node.js, Ubuntu, Qt Creator, Postman, Agile Methodology, SDLC, OOP, TDD, Cucumber