Youssuf Hichri

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EDUCATION

Algonquin College — Ottawa, ON
Post Graduate Certificate in Cloud Development And Operations — *January 2026 - December 2026*

Carleton University — Ottawa, ON
Bachelor of Science (Honours) in Computer Science — *October 2025*

EXPERIENCE

Software Developer Co-op — Sep. 2022 – Dec. 2024
Canada Revenue Agency (CRA) — *Ottawa, ON*

- Designed SQL queries for efficient data retrieval and reporting across multiple database systems, improving data processing speed and accuracy
- Built and maintained applications using Apache Struts, Java Spring Framework, and JavaScript integrating front-end components with backend services
- Developed an admin reporting portal using Struts, Spring Boot and JavaScript, allowing users to execute predefined PostgreSQL queries and export results to Excel, significantly improving data accessibility
- Collaborated with Business Analysts to transform design wireframes into functional prototypes, showcasing work in routine meetings and incorporating feedback to ensure alignment with business requirements

PROJECTS

Cryptography CLI Application | *C++17, OpenSSL 3.x, Make, Linux*

- Developed a command-line cryptography toolkit implementing AES-256-CBC-CTS and Blowfish symmetric encryption with PBKDF2 key derivation, reducing encryption implementation complexity by providing a unified interface for multiple algorithms
- Developed RSA public-key infrastructure supporting 2048/4096-bit key generation, OAEP-padded encryption/decryption, and SHA-256 based digital signatures, enabling secure file authentication and non-repudiation
- Designed automatic algorithm detection system using file header metadata for seamless decryption, eliminating user requirement to specify encryption method and improving user experience

Cloud Resume Challenge | *AWS, Python, GitHub Actions, DynamoDB*

- Designed and deployed a serverless resume website using AWS services (S3, CloudFront, Lambda, API Gateway, DynamoDB) with custom domain and HTTPS, implementing infrastructure as code principles
- Automated deployment workflows using GitHub Actions CI/CD pipelines, including pytest execution, Lambda function updates, S3 synchronization, and CloudFront invalidation

Sarcasm Detection System | *Python, TensorFlow, LSTM, Transformers*

- Developed an ensemble deep learning system using LSTM, Attention, and Transformer architectures for sarcasm detection in articles
- Achieved 85% accuracy through model ensemble techniques and comprehensive hyperparameter optimization
- Built modular architecture supporting easy integration of new model architectures

Feynman.AI | *Next.js, React, TailwindCSS, GROQ API, Whisper*

- Developed an AI-powered educational platform using Next.js, React, and TailwindCSS, integrating GROQ API for real-time feedback
- Implemented audio processing features using Web Audio API and Whisper Large v3 for transcription
- Led frontend development in a team of 4, focusing on responsive design and real-time user interaction

TECHNICAL SKILLS

Languages: Java, Python, C++, JavaScript, SQL (PostgreSQL), HTML/CSS
Frameworks: React, Next.js, Spring Boot, Apache Struts, Node.js, TailwindCSS, Flask
Developer Tools: Git, GitHub Actions, AWS (S3, Lambda, CloudFront, API Gateway, DynamoDB), Docker, JIRA, Make, GDB
Libraries: OpenSSL, TensorFlow, NumPy, pandas, matplotlib, seaborn
Certifications: Jr Penetration Tester (Tryhackme), AWS Certified Cloud Practitioner (AWS)