Andre Menezes

andremenezes231@hotmail.com — andremenezes.dev — +1 (437) 992–5850
github.com/amenezes2311 — linkedin.com/in/andremenezes2002

Education

McMaster University *September 2021 – April 2026*

B.A.Sc., Computer Science (Co-op)

- Deans' Honour List GPA 3.9 / 4.0
- **Relevant Coursework:** Natural Language Processing, Fundamentals of Machine Learning, Applications of Machine Learning, Data Mining; Sequential Decision Making (MDPs, Bandits); AI – Innovative Technologies

Languages:	Python, JavaScript, TypeScript, Java, SQL, C++
ML / Data:	PyTorch, NumPy, Transformers, Data Mining, Model Evaluation, CNNs
Frameworks:	React, NextJS, Flask, Tailwind CSS
Tools:	Linux, Git, Docker, AWS, GCP, PostgreSQL, Jira

Work Experience

Ericsson — Ottawa, Ontario, Canada *January 2025 – August 2025*

NG-OLLS — Radio Software Developer

- Developed and integrated features in a high-complexity telecom system, including power supply management, capability exchange, notifications, and measurement objects;
- Improved CI integration test frameworks, supporting dozens of automated test executions per week and increasing release reliability;
- Diagnosed and resolved system integration issues (e.g., radio-to-database mismatches), reducing debugging and validation overhead.

Ericsson — Ottawa, Ontario, Canada *May 2024 – December 2024*

Indoor Planner — Software Developer

- Contributed to a large-scale React/Redux web application (150k+ LOC) supporting indoor radio planning workflows;
- Implemented UI and configuration enhancements, including 3D view labelling, improving usability and validation;
- Participated in functional and regression testing across multiple configurations to improve release quality.

HamOnt Sports — Hamilton, Ontario, Canada *June 2023 – September 2023*

Software Engineer Intern

- Built analytics dashboards using React, NextJS, and TypeScript to summarize real-time data for stakeholders;
- Designed and exposed backend APIs using Java Spring Boot, supporting personalized scheduling for 6,000+ users;
- Improved system performance by 76% through front-end and back-end optimizations.

Projects

Fairness in Facial Emotion Recognition *September 2025 – December 2025*

Machine learning project analyzing demographic bias in facial emotion recognition systems.

- Reimplemented a VGG-style CNN on the FER2013 dataset (35,888 images) using PyTorch, achieving 72.61% test accuracy;
- Designed a fairness-aware evaluation pipeline using proxy demographic labels inferred with DeepFace;
- Identified performance disparities of up to 7% across genders and 8.9% across racial groups through per-group accuracy and recall analysis;
- Demonstrated how aggregate accuracy can mask systematic demographic bias in deployed ML systems.

Skin Lesion Classification: Malignant vs. Benign *March 2024 – April 2024*

Deep learning project for automated skin cancer screening.

- Trained a ResNet-50 CNN using transfer learning on 3,297 dermoscopic images from ISIC;
- Implemented a two-stage warmup and fine-tuning pipeline, achieving validation ROC-AUC > 0.90;
- Applied data augmentation, mixed-precision training, and cosine learning rate scheduling to improve performance and efficiency.

Face Encrypt *February 2022 – May 2022*

AI-powered biometric security system.

- Built a facial recognition pipeline using face embeddings for biometric authentication prior to file encryption and decryption;
- Designed a modular Python system integrating face detection, identity matching, and cryptographic file security.