

Temi Otun

313 Harvest Hills Way NE | T3K 2L8 | Calgary, Alberta
(403) -991-6176 | otun@ualberta.ca | [Personal Website](#)

EDUCATION

University of Alberta

Bachelor of Science, Major in Computing Science –Artificial Intelligence Specialization

Expected April 2027

Edmonton, AB

- **Relevant Coursework:** Algorithms I, Machine Learning I, Introduction to Reinforcement Learning, Linear Algebra II, Calculus III, Introduction to Artificial Intelligence, Introduction to Applied Statistics II, Computer Organization and Architecture I
- **Awards:** Jason Lang Scholarship

EXPERIENCE

Machine Learning Intern

The Metabolomics Innovation Centre

January 2025 – August 2025

Edmonton AB

- Enhanced long-range temperature forecasting system, resulting in up to **47%** lower MAE with an average **24.3%** improvement across a six-year test set compared to previous approaches
- Developed multivariate time series models for precipitation forecasting, incorporating **100+** climate features and outperforming baseline models in **73%** of test years
- Assembled forecasting pipelines with advanced feature engineering and benchmarked **20+** ML models, attaining a **42%** accuracy improvement over baseline methods
- Automated SQL pipelines to ingest weather and climate data from APIs and web scrapers, generating new feature combinations to support testing and improvement of forecasting models

Machine Learning Research Assistant

University of Alberta

September 2024 – Present

Edmonton AB

- Contributed to **3** machine learning systems in computational psychiatry and predictive healthcare, including dementia detection and ECG signal modeling on large scale clinical datasets, improving diagnostic accuracy
- Synthesized insights from **40+** research seminars, on survival analysis and disease prediction, applying advanced statistical and ML methods to strengthen ongoing projects
- Documenting and analyzing **15+** ML experiments, applying feature engineering, hyperparameter tuning, and evaluation pipelines to improve performance across classification and regression tasks

Data Management Intern

InfoStrux

January 2024 – May 2024

Vancouver, BC

- Optimized **25+** SQL queries in Snowflake, reducing execution time by up to **60%** and boosting performance of business intelligence dashboards
- Partnered with a senior data engineer to design Snowflake staging and curated layers for **3** datasets; wrote and tuned **30+** queries, improving data reusability and cutting time-to-insight by **40%**
- Constructed and maintained **10** database schemas in Snowflake to support diverse data types, improving pipeline efficiency and data flow

PROJECTS

Emotion Detection Neural Network [Github](#)

August 2025

- Trained a deep convolutional neural network (CNN) in PyTorch on the FER 2013 dataset (**32k+** labeled images), utilizing OpenCV for multi-class facial emotion recognition
- Achieved **70%** test accuracy across **7** emotion classes, outperforming baseline models by **15%**, and integrated webcam inference to enable real-time emotion detection
- Incorporated preprocessing techniques (grayscale normalization, resizing, augmentation) with RELU activations and batch normalization, to improve model accuracy

Personal Website [Github](#)

June 2025

- Launched a personal portfolio with React and Tailwind CSS, hosted on Vercel with backend email integration on Render, providing a platform showcasing AI/ML and software projects
- Improved user experience with interactive UI features, leveraging Framer Motion, Vanta.js, and React-Scroll for animations and dynamic backgrounds

Lung Cancer Detection [Github](#)

January 2025

- Accomplished a recall score of **99%**, accuracy score of **94%**, precision score of **95%**, and f1 score of **97%** on the best classification model
- Built and compared multiple ML models (SVM, k-NN, Random Forest) to determine the most effective classification approach
- Applied preprocessing techniques including SMOTE, and k-fold cross-validation to address class imbalance and improve model performance

Research

September 2024 – November 2024

- Refined ML models on audio datasets for early detection of dementia and mild cognitive impairment, tackling both classification and regression tasks
- Developed a Random Forest model for the ICASSP 2025 SPGC challenge, achieving accurate patient classification into **3** diagnostic categories with evaluation scores
- Explored self-supervised and pre-trained models from prior research, improving predictive metrics (F1, recall, precision, and RMSE) compared to baseline models

Basketball Chatbot [Github](#)

July 2024

- Created a Chatbot in Python connected to a SQL database containing **4800+** NBA players and **30+** teams, enabling queries on player stats, team rosters, and historical data
- Designed a custom interface in SwiftUI alongside Firebase authentication with encrypted credentials, ensuring secure login and data protection for users

SKILLS

Programming: C, Python, SQL

Libraries & Frameworks: PyTorch, TensorFlow, scikit-learn, NumPy, Pandas, OpenCV, Matplotlib, Darts, Nixtla, React, Tailwind CSS

Tools & Platforms: Git, Linux, Bitbucket, Docker, Snowflake

Spoken Languages: English, Yoruba