Temi Otun

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EDUCATION

University of Alberta **Expected April 2027**

Bachelor of Science, Major in Computing Science –Artificial Intelligence Specialization *Edmonton, AB*

- **Relevant Coursework:** Algorithms I, Machine Learning II, Software Engineering, Database Management, Reinforcement Learning, Linear Algebra II, Calculus III, Artificial Intelligence, Applied Statistics II, Computer Architecture I
- **Awards**: Jason Lang Scholarship

EXPERIENCE

Incoming Data Engineering Intern **May 2026– August 2026**

RBC Amplify *Vancouver BC*

- Will collaborate with a cross-functional student team to design and prototype a data-driven solution addressing a real RBC business challenge through rapid iteration and experimentation
- Expected to contribute to data engineering workflows, including pipeline development, data modeling, and cloud-based ETL processes to support analytics and product integration for the final Amplify project demo

Machine Learning Intern **January 2025 – August 2025**

The Metabolomics Innovation Centre *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 **September 2024 – Present**

University of Alberta *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 **January 2024 – May 2024**

InfoStrux *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

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