Ifechukwudeni Teddy Oweh

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Education

Tarleton State University (Texas A&M System), Stephenville Texas **January 2022 – May 2025**

Computer Science & Mathematics, Con. - Artificial Intelligence & Data Science

Work & Research Experience

Apple Inc. **May 2023 – September 2023**

AI/ML Engineering Intern *Cupertino, California*

- Developed a Python-C hybrid library with custom AI ensemble models algorithms for high multicollinearity identification used to develop algorithms for Apple devices crash predictions and proximity-based predictions further used for ecosystem optimizations and analysis.
- Secured a position in the top 10 finalists for the Apple iContest (intern ideathon).

NASA - National Aeronautics and Space Administration **Aug 2022 – May 2023**

Research Payload Engineer *Huntsville, Alabama*

- Built a payload system for a sub-scale rocket, integrating real-time flight analytics via a custom UDP server, culminating in multifaceted image processing operations at 4600fts through a bespoke SDR Radio Receiver.

NAVSEA - Naval Sea Systems Command **July 2022 – Mar 2023**

Research AI/ML Systems Engineer *King George, Virginia*

- Built an AI/ML algorithm that uses Markov Chains, Naïve Bayesian and greedy search for automated scheduling, strategic weapon pairings, and predictive models systems in weapons systems coordination.

TIAER - Texas Institute for Applied Environmental Science **Jan 2023 – May 2023**

Computational Modelling Student Researcher *Stephenville, Texas*

- Refined and converted legacy VB.net statistical model systems into a C++ codebase for Unix systems enhancing AI-driven environmental research while improving the Ruby on Rails simulation framework for sediment crop losses - *Website*

Tarleton State - Machine Intelligence Security and Research Lab (MISR) **February 2022 – Present**

Lead Student Researcher *Stephenville, Texas*

- Developed the Mini Batch RINDEX algorithm using RIndex cluster metric for efficient Multicollinearity in machine learning models and custom distributed computing data partitioning systems.

Tarleton State - Mathematics Department **May 2022 – August 2022**

Student Researcher *Stephenville, Texas*

- Utilized stochastic processes on networks and differential equations to develop advanced disease propagation models, enhancing disease control insights through dynamic systems and algorithmic simulations.

Projects

NeuronIO | *Git*

- Implemented a custom Transformer neural network architecture with custom layers, activation functions, backpropagation, optimizers, loss functions, and extended C shared libraries for vector store embedding operations

QuantX | *Git*

- Developed C++ modules for real-time stock data collection, market analysis, AI-driven position sizing, and data insights, dynamic hedging strategies, monte carlo simulations, and slippage modeling for risk reduction and strategy enhancement.

WHOTAI | *Git*

- Developed an ensemble machine learning model for the Naija Whot card game (similar to UNO), incorporating parallelization for training corpus generation and a distributed system game simulation with the Model. The ensemble integrates a Random Forest algorithm developed from scratch with corpus vector embeddings.

Afterhours

- Developed a full-stack web and mobile app to allow college students find students with same major, integrating middleware-driven HTTP APIs and WebSocket functionality with Node.js. Utilized MongoDB for data management. Implemented a cross-platform UI using React Native (mobile) and ReactJS (web).

Technical Skills

Languages/Database: Python, C++, C, Assembly (x86, AVR), C-sharp,VB, Ruby, Scala, SQL, MongoDB, PostGres
Frameworks& Tools: Pytorch, Tensorflow, Sklearn, Tableau, Docker, Kubernetes, Caffe, Coreflow, GIT, Linux/Unix, AWS EC2/S3
Frontend: Swift, ReactJs, Angular, React Native, Flutter,TailwindCSS
Backend: Nodejs, NestJS, Java, Flask, FastAPI
Other: PCB Design, Arduino, RasperryPI,