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**

Software Engineering Intern *Cupertino, California*

- Engineered a Python-C AI hybrid library with ensemble ai models for multicollinearity handling, targeting Apple device crash and proximity predictions
- Built a multi-threaded REST API with WEBUI for analytics and introduced the MCQI system to identify and optimize critical device failure metrics. Discovered key metric causing failures and presented it to Apple Home Leaderships

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

Research Payload Engineer *Huntsville, Alabama*

- Developed a payload system for a sub-scale rocket, integrating real-time flight analytics via a custom UDP server a and WEBUI, with the rocket 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*

- Led the development of 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, Project Page *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

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

Lead Student Researcher *Stephenville, Texas*

- Designed the Mini Batch RINDEX algorithm with the RIndex cluster metric and a custom distributed computing and data partitioning system, optimizing multicollinearity handling in ML models. Achieved faster training and higher accuracy than KNFE and COMB algorithms

Projects

NeuronIO | C, Python *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 | C++, Quantitative Analysis, Market Strategies *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 | C, Python, Multithreading *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.

Scene Query | C++, ReactJS, Python, CLIP, YOLO

- Developed a AI software utilizing CLIP, YOLO and CIFAR100 for real-time video semantic analysis, capable of extracting and categorizing specific frames associated with desired prompts, with distributed and parallelized c++ algorithms embedded into a REST API and a React WEBUI.

Afterhours | ReactJS, React Native, NodeJS, MongoDB, Redux

- Developed a full-stack web and mobile app for college students to find peers in the same major and courses. Integrated a Large Language Model Middleware (LLM) for AI queries based on conversation context and general information using HTTP APIs and WebSocket functionality with Node.js, while managing data with MongoDB..

Teddy Oweh | ReactJS, React Native, NodeJS, MongoDB, Redux, AWS, Pytorch, Pandas

- Built a mobile app and REST API for viewing website traffic analytic, content updates (about, projects and research page), and AI-driven real-time analysis, combining GRU-based sequential pattern capture, CNN-based spatial attention, GMM clustering for site views, MongoDB data management, and RMSprop optimization with 95%+ accuracy.

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,