

IFECHUKWUDENI TEDDY OWEH

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Education

Tarleton State University (Texas A&M System), Stephenville Texas

January 2022 – December 2023

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

GPA 3.9

Work & Research Experience

Herds.

May 2023 – Present

Cofounder & CTO - React Native, ReactJS, NodeJS, Python, Pytorch, AWS, Docker

Stephenville, Texas

- Developed a mobile social network app for college organizations, focusing on fraternities and sororities, featuring seamless communication, event management, marketplace, and live crowdsource data for party/bar density.
- Integrated PyTorch neural networks for post-content moderation, employing Latent Dirichlet Allocation and TF-IDF algorithms for topic modeling and trending topics identification.
- Developed internal web tools for user management, app growth & activity analytics, and also system to refine training data for post-content moderation, and developing a beta neural search algorithm for posts, as opposed to conventional semantic keyword search/cosine similarity matching.
- Deployed the entire server system on AWS, containerized in Docker, and maintained as the sole engineer, collaborating with a business-oriented co-founder handling outreach and partnerships. The app is successfully live on the app store.

Tarleton State University.

Sept 2023 – Present

Undergraduate Researcher - Cuda C, Python, YOLOv4, Pytorch, Pandas, & OpenCV

Stephenville, Texas

- * Developed an ML algorithm for license plate segmentation, featuring non-maximum suppression, edge detection, RNN-based vehicle tracking, and real-time speed estimation via homographic transformations.
- * Utilized transfer learning with YOLOv4, GANs, and LSTM for license plate detection

Apple Inc.

May 2023 – Sept 2023

AI/ML Engineering Intern - C++, PyTorch, Pandas, Sklearn, ReactJS

Cupertino, California

- * Engineered a Python-C ML hybrid library with custom ensemble ai models algorithms cross-validated with latent variables from variational auto-encoder (VAE) neural networks systems, for multicollinearity handling, targeting Apple Home Devices (iPhones, HomePods, AppleTV + 3rd party devices) crash and proximity predictions
- * Built a multi-threaded REST API with WEBUI for analytics and introduced the MCQI system to identify and optimize critical failure metrics. Discovered key metric causing failures and presented it to Apple Home Leadership + Org VP.

NASA - National Aeronautics and Space Administration

Aug 2022 – May 2023

Research Payload Engineer - Python, bmp388, IMU, C++, ReactJS

Huntsville, Alabama

- * Developed a payload system for a sub-scale rocket, integrating real-time flight analytics via a custom UDP server 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 - Python, Pytorch, Java

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 - ASM, C++, Ruby on Rails, AWS - [Project Page](#)

Stephenville, Texas

- * x86 compiler system development in c++ to convert VB.net statistical models (QUAL-TX, QUAL2E, QUAL2K) into Unix-compatible C++ for aws cloud computing, and refining the Ruby on Rails framework for sediment crop loss simulations.

Tarleton State - Machine Intelligence Security and Research Lab (MISR)

Feb 2022 – May 2023

Lead Student Researcher - Python

Stephenville, Texas

- * Developed Mini Batch Spectral Decomposition machine learning algorithms for efficient Multicollinearity handling in machine learning models and data segmentation + distributed processing algorithm. Achieved faster training, less redundant training set features, and higher accuracy than KNFE and COMB algorithms.

Tarleton State - Mathematics Department

May 2022 – August 2022

Student Researcher - Python, SciPy, Matplotlib, NetworkX, Pandas, SymPy

Stephenville, Texas

- * Applied stochastic processes and differential equations to develop disease propagation models, augmenting disease control insights through dynamic systems and algorithmic simulations.

Projects - *Github*

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.

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, Pandas, 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,