Teddy Oweh

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Education

Morgan State University, Baltimore Maryland **Dec 2026**
Computer Science & Mathematics, (Artificial Intelligence & Deep Learning) *GPA 4.0*

Relevant Coursework: Calculus 1-3, Linear Alegbra, Machine Learning 1, Intro to Data Science, Data Structures & Algorithms, Discrete Math

Awards: Top 10 Apple iContest (Internal Hackathon, '23), 1st Place Google Hackathon 2024, 1st Place Howard University Hackathon, 5x Dean's list, 3rd Place JP Morgan Datathon, more and with over $30k won.

Notes: President of Computer Science Society, Led several hackathon teams, Taught a ML Workshop.

Technical Skills

Languages: Python, Java, Typescript & Javascript
Backend & Database: Flask, FastAPI, Nodejs, Spring Boot, MongoDB, SQL, Postgres
Frameworks & Tools: Pytorch, Sklearn, Pandas, Machine Learning, Deep Learning, NLP, Docker, GIT, TensorFlow, AWS

Work Experience

University of Southern California (USC/ISI) **May 2024 – Present**
AI/ML Engineering Intern - Machine Learning, Tensorflow, Python, GO *Los Angeles, California*

- Working on high performance ml computing.

Qside **Jan 2024 – May 2024**
Machine Learning Intern - Python, Pandas, Sklearn, Data Analytics & Science, Machine Learning *Baltimore, Maryland*

- Utilized Python and R for rigorous statistical testing, feature encoding, and transformation on demographic datasets, ensuring optimal data quality.
- Applied K-means and DBSCAN algorithms to socio-economic and behavioral data of foster youth, refining clustering parameters and **validating results in collaboration with senior data scientists**. This approach led to a 30% enhancement in clustering accuracy and robustness
- Increased precision in **identifying at-risk subgroups by 20%** through iterative optimization of clustering models, leveraging hyperparameter tuning, and validating cluster validity using metrics like silhouette score and (WCSS). Leading to more effective identification and support of vulnerable population

Apple Inc. **May 2023 – Sept 2023**
AI/ML Engineering Intern - Python, C++, PyTorch, Pandas, Sklearn, Flask, Kubernetes *Cupertino, California*

- **Trained and Benchmarked ML models:** Trained decision tree models using operational metrics data (sensor readings, usage logs) from iPhone and Apple Home Devices. Benchmarked against algorithms such as random forests and gradient boosting using F1 score, precision, and accuracy metrics, achieving 95% accuracy in predicting device crashes
- **Conducted Rigorous Data Analysis and Engineering:** Performed extensive preprocessing on telemetry and operational metrics data, including high-dimensional correlation analysis, multivariate feature selection , data cleaning, and simulations, to optimize model inputs and enhance prediction efficiency.
- **Enhanced System Reliability & API Development:** Identified critical metrics and protocols responsible for device failures through stochastic simulations and ranking algorithms, achieving an 80% enhancement in crash prediction precision. and built an API system to wrap ML models and device ranking algorithms for seamless integration

Tarleton State University. **Sept 2023 – Dec 2023**
Undergraduate Researcher - Cuda C, Python, YOLOv4, Pytorch, Pandas, & OpenCV *Stephenville, Texas*

* **Developed deep learning models for license plate segmentation** and vehicle tracking with LSTM for sequence analysis, achieving **18% higher Jaccard Index (IoU)** and 30% faster processing.
* **Outperformed Traditional CV Methods** Utilized non-maximum suppression, edge detection, and homographic transformations, significantly surpassing traditional methods like Haarcascades and Sobel operators.

NASA - National Aeronautics and Space Administration **Jan 2023 – May 2023**
Research Payload Engineer - Python, bmp388, IMU, C++, ReactJS *Huntsville, Alabama*

* Developed a customized UDP server architecture for efficient signal demodulation, facilitating reliable telemetry data transmission. This system enabled real-time processing of flight data and telecommand responses at est 6000fts.
* **Built a Distributed System for Data Visualization:** Designed and deployed a robust web application (WEBUI) for seamless data transmission and visualization. Implemented complex image processing tasks triggered by telecommand control signals from an SDR receiver, enhancing the responsiveness and operational control of the rocket's systems.

Projects - *Github*

I am an open-source developer with over 91+ projects on my GitHub profile. Including ML models on huggingface, 20+ web mobile applications, backend & API scaled & deployed systems, 9+ published Python libraries, and various projects spanning database & machine learning

Retrak - Python, OpenCV, Pytorch, Redis, scikit-learn, NumPy, LangChain, OpenAI GPT API

* Engineered a deep learning system for video scene retrieval by sampling frames every 2 seconds, creating timestamped 8x8 frame grids, and converting them to Base64. Used GPT API to generate frame descriptions, transformed these into vector embeddings, and applied Retrieval-Augmented Generation (RAG) with LangChain for prompt-matched scene extraction.

WHOTAI | Python *Git*

* Trained a ensemble model with a customer Random Forest + Decision Tree Alogrithm from scratch and Parallel Programming to simulate/play Naija Whot, an African Card Game similar to Uno.

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

NeedaResume - ReactJS, NodeJS, Python,

* Developed an AI application with over 2,000+ users, enabling resume storage, job description uploads to generate tailored ATS-friendly resumes. Built with React.js frontend and Python/Node.js backend microservices, featuring RAG(LangChain), Semantic Indexing & Embeddedings, real-time JSON autocomplete from OpenAI and PDF tracking.