Anthony Nwafor

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SKILLS

- **Programming Languages:** C, C++, JavaScript, Java, HTML, CSS, SQL, Python, Typescript,
- **Frameworks:** TensorFlow, Keras, Sci-kit-learn, NumPy, Pandas, React, Flask, Django, Pytorch, ElectronJs, CVXOPT.
- **Technologies:** GitHub, Git, Figma, MATLAB, Linux, Eclipse, MYSQL.

EDUCATION

Mississippi Valley State University **Jan 2022 – Dec 2025**

BS, Computer Science & Mathematics

WORK EXPERIENCE

ActiveCampaign **June. 2024 – Aug 2024**

Software Engineering Intern *Indianapolis, IN*

- Worked on a flexible Zapier action to update contact tags based on event triggers, even when only the email address is provided.
- Worked on a command-line tool to manage and automate the execution of custom scripts within the ActiveCampaign Automation Platform.

Science Gateway Institute **June 2023 – July 2023**

Software Engineering Intern *Virtual*

- Co-developed a full-stack web application with a natural language processing (NLP) chatbot using Python, cloud computing (AWS), and full-stack technologies (HTML, CSS, Figma, JavaScript, SQL, PHP, and cPanel).
- The application was successfully deployed to AWS and received over 27% increase in unique visitors in its first month.
- Utilized Python to develop the NLP chatbot, AWS to host the application, and full-stack technologies to build the user interface.

PROJECTS

Machine Learning Algorithms from Scratch (Python, Cvxopt, Pandas, Numpy, Matplotlib) **2025**

- Implemented machine learning algorithms from scratch, including SGD, SVM, PCA, Random Forests, Genetic Algorithms, and RNNs.
- Developed and optimized models: SGD for linear regression, SVM with polynomial kernel for classification, PCA for dimensionality reduction, Random Forests for ensemble learning, Genetic Algorithm for TSP optimization, and RNNs for sequence data.
- Managed data preparation, model initialization, and training; evaluated and tested model performance; applied trained models for predictions.

Portfolio Optimization with Stochastic Control (Python, Javascript, Flask, Scipy, Electronjs) January 2025

- Developed a portfolio optimization model using Mean-Variance Optimization, Geometric Brownian Motion, and Monte Carlo Simulations, incorporating optimal stopping theory and risk-neutral pricing for dynamic portfolio management
- Built an Interactive dashboard for visualizing portfolio performance, with updates and backend integrations.

High-Frequency Trading System (Python, Flask, Tensorflow, Keras, Yfinance, Streamlit) **January 2025**

- Developed a high-frequency training system for real-time stock data analysis and strategy simulation using Flask and Streamlit
- Integrated Yahoo Finance API for livestock prices and used LSTM models to generate signals (buy, sell, or hold)
- Built a Streamlit dashboard to visualize stock prices, trade actions, and performance metrics, while backtesting and tracking strategy outcomes

Operating System - Enigma (*C, C++, Python, ASM*) **Aug 2023 – Present**

- Designing and implementing a machine learning-powered operating system for optimized resource allocation and performance enhancement.

- Expected to Achieve a 15% reduction in resource usage and a 20% performance improvement through Enigma's dynamic allocation based on application behavior.
- Leveraged machine learning algorithms (Experimental: Re-enforcement Learning) within Enigma to continuously learn application behavior patterns and adapt resource allocation strategies for ongoing efficiency gains.

2D Car Game (C++) **Dec 2022**

- Built a cross-platform 2D car racing game using SFML, featuring fair real-time physics and collision detection for a better driving experience.
- Incorporated power-ups and one/two-player modes for enhanced strategy and social gameplay.