Uchenna Njoku

uchenna.c.njoku@gmail.com | uchennanjoku.com | https://github.com/UchennaNjoku |
https://www.linkedin.com/in/uchennanjoku/ | (559)-776-2242

EDUCATION

Bethune-Cookman University | *Presidential Scholar* *expected graduation date: December 2025*
Computer Science Major - Mathematics Minor

EXPERIENCE

Goldman Sachs | *Software Engineer Intern* *June 2025 - August 2025*

- Developed a secure, scalable CSV report generation and download system for the Payroll Tax Calculator using **Spring Boot, AWS ECS Fargate, Lambda, S3, and Aurora PostgreSQL,** with dynamic Java-based formatting and zero-knowledge password encryption—**cutting processing time by 60%** and ensuring full audit compliance.
- Led full-stack implementation of a U.S. Tax Reciprocity Rules Engine, designing **OpenAPI-driven REST APIs** and an accessible **React + TypeScript** UI for managing multi-state income tax exemptions—**eliminating 95% of manual entries** and reducing compliance errors to zero for managing **46,000 employees in 30+ countries**

Cisco (Splunk) | *Software Engineer Intern* *January 2025 - April 2025*

- Engineered core functionalities of Splunk's Maintenance Window Service in **Go**, automating ingestion of maintenance schedules from Google Sheets into Splunk—processing **over 10,000 rows of operational data per week** and **reducing manual scheduling effort by 70%**
- Implemented checksum-based diffing and conflict-detection algorithms in Go, reducing redundant Splunk REST API calls **by 30%,** cutting duplicate schedule errors **by 35%**, and **catching 98% of deployment conflicts** (e.g., overlapping upgrade cohorts).

Amazon (Amazon Web Services) | *Software Engineer Intern* *May 2024 - August 2024*

- Lead the **Local Compute Infrastructure (LCI) Bootloader Rollout** project to streamline and automate deployment process of network devices across the expanding LCI fleet, impacting over **500 network sites globally**
- Developed a comprehensive release, rollout, and deployment pipeline for new bootloader versions and **Preboot Execution Environment (PXE)** artifacts whilst creating and implementing testing packages and environments, **reducing bootloader release failures by 20%**, expected to **decrease system downtime by 30%**.

May 2023 - August 2023

- Architected the migration of the AWS Network host generation workflow with automated pipelines, leveraging AWS Services such as **CloudFormation, CloudWatch, Lambda,** and **Cloud Development Kit**, increasing site build speed by **40%**
- Increased robustness of **450+ AWS Network Centres** which run **over 1 million** external services, resulting in increased reliability and manageability, implementing these changes using **Typescript, Java, and Python**
- Assisted in network host initialization and maintenance processes, implementing status checkers to allow for ease of tracking in a user friendly interface to monitor metrics

General Motors EcoCAR EV Challenge | *Team Lead* *January 2023 - December 2024*

- Led the **Connected and Autonomous Vehicles (CAVS) sub-team**, driving the implementation of efficiency-oriented solutions and innovations to address the challenges inherent in electric vehicles.
- Engineered advanced vehicle control algorithms using **MathWorks MATLAB and Simulink,** significantly enhancing vehicle performance and efficiency. Validated strategy implementations using **dSPACE** and **CARLA** simulations.
- Refined extensive datasets from onboard sensors by applying Fourier and Wavelet transforms for noise reduction. Leveraged **Principal Component Analysis** and **t-distributed stochastic neighbor embedding (t-SNE)** for data parsing with machine learning predictive models to gain insights into vehicle health and energy consumption.

PERSONAL PROJECTS

VolSurf-CPP - Volatility Surface Engine

- Developed a high-performance, volatility surface engine in **modern C++ with Python bindings**, featuring multi-threaded implied volatility solvers (using OpenMP) and modular architecture for ingesting and processing large-scale time-series data.
- Delivered **real-time interactive dashboards** (Plotly + Streamlit) and benchmarking pipelines against industry libraries, enabling scalable analysis, and high-throughput workloads, streaming financial data from Yahoo FInance and Polygon.io.

ACTIVITIES & HONORS

IEEE Robotics Society

- Orchestrated hardware efforts for IEEE SoutheastCon Robotics, winning 1st in Florida with a 4-wheel-drive obstacle-navigating robot; deployed **Jetson Nano** in a containerized **Docker** architecture, reducing system failures significantly.

Jamaica Mathematical Olympiad

- Placed **3rd out of over 2000 students** in the National Mathematical Olympiad held by the University of the West Indies,
- Selected to represent Jamaica at the **XVII Central American and Caribbean Mathematical Olympiad**

SKILLS

Languages: C++, Python, Java, JavaScript, R, HTML, CSS, Swift, TypeScript, Rust, Go, C#, SQL, GraphQL, UNIX,Bash
Technologies: React, NodeJS, Angular, TensorFlow, NumPy, Pandas, Linux, Spring, Docker, AWS, SciPy, scikit-learn