SYLVESTER DUAH

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EDUCATION

Rutgers University, *Piscataway* **– NJ** **Expected Graduation May 2026**
B.S Computer Science + minor in Business Administration **GPA: 3.72/4.0**

TECHNICAL SKILLS

Languages: Python, Java, C/C++, Assembly, JavaScript, Solidity, Lua, PostgreSQL, MongoDB
Tools: Django/Flask, React/Three Js, Hugging Face, RAG, Groq, AWS/Azure, Kubernetes, Unity, Flutter
Coursework: Data Structures & Algorithms, Computer Organization & Architecture, Calculus
Frameworks: Pandas, NumPy, Scikit-Learn, Matplotlib, TensorFlow, PyTorch, Keras, Transformers, Torch, SciPy, Omniverse

EXPERIENCE

IBM – *Accelerate Client Engineering and Technical Sales Track* | **Remote** **June 2024 – July 2024**

- Developed and presented an intelligent chatbot solution using IBM technologies, processing **1,000+** insurance datasets, resulting in a **30%** reduction in customer inquiry response time
- Enhanced customer-company interactions by **40%** through implementing **NLP**-based sentiment analysis and **ML**-driven response generation in a team-based insurance project
- Delivered a compelling prototype presentation to IBM stakeholders, resulting in approval for a pilot program with a major insurance client use

PROJECTS

Extend **November 2024 – present**

- Co-founded Extend, Leveraging AI and Metaverse technologies to reduce design iteration time by **30%** while generating more than **100** sustainable building plans that cut environmental impact by **20%**
- Engineered advanced pipelines, including **3D** image generation system with Nvidia Omniverse and fine-tuned stable diffusion model, achieving **10%** image accuracy, and developed an interactive Metaverse visualization tool in Unity and three.js to improve design resilience by **40%**
- Researched and applied sustainable construction strategies such as modular designs and recycled materials, reducing project cost by **25%** while preserving structural integrity

IBM Call 4 Code (Hackathon) **July– October 2024**

- Spearheaded a Generative AI project resulting in a **25%** reduction in construction costs for affordable housing, leveraging Python and TensorFlow for modeling efficient techniques
- Leveraged Beautiful Soup for web scraping and data processing, improving AI's accuracy in understanding user prompts from **70%** to **92%**
- Led a team of **five** in deploying Deep Learning models with **Python**, **Fast API**, and **TensorFlow** for precision analysis of urban infrastructure, improving accuracy by 25% and streamlined project management using **Gemini** and **Jira** tools

AI Trading Analysis **March- April 2024**

- Developed a DL LSTM trading platform incorporating RSI and MACD indicators, improving next-day trade prediction accuracy by 18% and data retention by 30%
- Integrated a **GPT**-based sentiment analysis and trading bot, achieving a **140% ROI** increase on a demo platform for stocks and cryptocurrencies

Banking Assistance Application **February - March 2024**

- Engineered an ML-based banking app achieving 85% accuracy in fraud detection, credit scoring, and loan eligibility assessment, reducing manual review time by 40%
- Deployed a Generative AI Chatbot that increased daily active users by 40% and improved customer satisfaction ratings from 3.5 to 4.2 out of 5
- Optimized customer segmentation using pipelines and **KMeans**, enhancing fraud mitigation and boosting model efficiency by **23%** and accuracy by **6%**

CERTIFICATIONS

AI Engineering Professional Certificate-V2 (IBM) **March 2024**

- Mastered deep learning and machine learning using **TensorFlow**, **Keras**, and **PyTorch** for projects in computer vision and image processing with **Python**

Applied AI **March 2024**

- Advanced in Generative AI and AI development, creating applications with Watson APIs and **Python/Flask**, and building AI-powered chatbots; studied Python for Data Science