KWABENA BUAMONO ABOAGYE-OTCHERE

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EDUCATION

University of Texas Rio Grande Valley (UTRGV)	**Edinburg, Texas**
MS Computer Science, GPA: 3.67	**Expected May 2025**

Ashesi University	**Berekuso, Ghana**
BSc. Computer Science, GPA: 3.34	**June 2021**

SKILLS

Skills: Agile (Scrum) development, API development, Research, Pair-programming, Tutoring, Machine Learning, Relational databases, Non-relational databases.
General tools: Python, C, C++, Java, Javascript, R, PHP, SQL databases, Git
Specific tools: Laravel, MySQL, MongoDB, Django, Docker, Flask, Pytorch, Tensorflow, Pandas, Spring Boot, Maven, Flyway, React, Postman, Visual Paradigm

ACHIEVEMENTS/AWARDS

Dean's List[1], Ashesi University   **Sept 2019 – Dec 2020**

WORK EXPERIENCE

SecLearn Lab – UTRGV   **Aug 2023 – Present**
Research Assistant
- Collect and analyze real-world data from MDFL systems to evaluate security and privacy risks presented by these systems.
- Highlight novel techniques to expose security and privacy risks of MDFL systems and develop and evaluate strategies to detect and mitigate these risks.
- Stack and Tech used: Git, GitHub, Python, BitBucket, LaTeX, RaspberryPi

Kalangu – Ashesi University   **Apr 2022 – Aug 2023**
Backend Engineer
- Built a disability-friendly, afro-centric learning management system funded by Mastercard.
- Brainstormed approaches to store and interact with various stimulating modules like assessment-gamification.
- Stack and Tech used: PHP/Laravel, SQL, REST, AWS Lambda, Docker, FFMpeg, Git, GitHub, Trello, Postman

Computer Science Department – Ashesi University   **Aug 2021 – May 2023**
Faculty Intern
- Teaching assistant for Intro to AI, Data Science, Machine learning, OOP, and Advanced Algorithms courses.
- Supervised students to build apps. Eg: Hate speech identifier, E-commerce recommender system etc.
- Stack and Tech used: Pytorch, Pandas, Scikit-Learn, Seaborn, Java, R, Flask, Excel

HACKATHONS

RealityHack – Massachusetts Institute of Technology (MIT)   **Jan 2024**
- Awarded scholarship for in-person hackathon at MIT media lab where I utilized extended reality technology (XR) such as ShapesXR and MetaQuest 3 to develop an immersive learning experience to study and simulate chemical reactions with reduced risk of physical injury from potentially harmful real-life accidents due to inexperience.

HackResearch - UTRGV College of Engineering and Computer Science   **Nov 2023**
- Designed an AI agent to tutor psychiatry students using retrieval augmented generation (RAG) to pose open-ended case study style questions and give feedback on their responses with Langchain, OpenAI and PineconeDB.

PROJECTS

Pattern Recognition of Industrial Systems via Magnetic Emissions   **Oct 2023 – Present**
- High-powered electromechanical system monitoring and fingerprinting using machine learning, IoT technology and cloud protocols.

Reinforcement Learning (RL) based Recommender System (RS) for MOOCs   **Sept 2023 – Dec 2023**
- A novel RL-based RS for MOOCs that exploits prerequisite relations between course concepts built with Pytorch.

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1. Awarded to students with a GPA of 3.5 or more on a 4-point scale.