Clyde Baidoo

1700 E Cold Spring Ln,
240-597-8446 clbai4@morgan.edu linkedin.com/in/clyde-baidoo-jr clyding.github.io

Education

Morgan State University **Aug 2022 – Dec 2025**
Bachelor of Science in Computer Science, GPA: 3.9 (Summa Cum Laude) *Baltimore, MD*
- Research Advisor: Prof. Timothy Oladunni

Publications (In Review)

[1] T. Oladunni, B. Ojeme, K. Maclin, and **C. Baidoo**, "When Should a Model NOT Change Its Mind? A Physiologic Perspective on Concept Drift in Multimodal ECG Deep Learning," *IEEE Access*, 2025.

[2] T. Oladunni and **C. Baidoo**, "Quantum-Inspired Multimodal ECG Generation with Complementarity-Preserving GANs," *IEEE Access*, 2025.

Relevant Coursework

- Data Structures
- Algorithms
- Operating Systems
- Database Design
- Machine Learning
- OOP (C++)
- Calc I, II, III
- Linear Algebra

Experience

Idaho National Lab, INL **May 2025 – August 2025**
Computer Vision Intern *Idaho Falls, ID*
- Optimized real-time object detection using transfer learning on EfficientDet, MobileNet, ResNet, and VGG16 with COCO/ImageNet, improving model inference speed by 35% using ONNX, TensorRT, and DeepStream.
- Benchmarked 10–100 RTSP video streams on edge devices (Jetson AGX Orin, RTX 5000 Ada Gen), reducing latency by up to 28% through pipeline tuning.
- Automated deep learning environment setup (CUDA, cuDNN, PyTorch) via Docker, reducing deployment time by 40%.
- Co-authored a research paper and delivered a final poster/presentation summarizing computer vision surveillance system performance across multiple edge devices.

National Basketball Association, NBA **June 2024 – August 2024**
Software Engineering Intern *Secaucus, NJ*
- Developed and deployed an interactive Android widget (Jetpack Compose, Glance) to deliver live game updates and schedules, improving user engagement for 100K+ app users.
- Implemented dark mode support across the Paywall and subscription flows, enhancing UI and user experience.
- Migrated UI from legacy XML layouts to Jetpack Compose, streamlining UI consistency and reducing technical debt.

Center for Equitable AI & Machine Learning Systems, CEAMLS **June 2023 – August 2023**
AI Research Intern *Baltimore, MD*
- Engineered a privacy-conscious surveillance system using Raspberry Pi, OpenCV, and TensorFlow, enabling motion-triggered tracking with edge computing.
- Integrated Wav2Vec for voice-based emergency alerts and built a Flask + SQL interface for rapid emergency contact retrieval.
- Addressed ethical and security concerns in surveillance tech through AI-powered privacy-preserving techniques.

Teaching and Mentoring Experience

Morgan State University **August 2025 - Present**
Teaching Assistant for Object Oriented Programming, Java (COSC 238) with Ankita Rijal *Baltimore, MD*
- Responsibilities: Weekly office hours for tutoring sessions, preparation of lecturing materials and examination questions, occassional lecturing of classes, grading of assignments.

Peer Bears **August 2024 - Present**
Peer Tutor and Mentor *Baltimore, MD*
- Responsibilities: Mentored newly enrolled freshmen students in the School of Computing, Mathematical, and Natural Sciences (SCMNS) to successfully navigate their career trajectory in Computer Science
- Weekly tutoring sessions of Calculus II, Physics 205, Math 113 and 114.

.

Technical Skills

Languages: Python, C++, Java, Kotlin, JavaScript, SQL, HTML/CSS
Frameworks: PyTorch, TensorFlow, Keras, DeepStream, GStreamer, Caffe, TensorRT, Numpy, Pandas
Developer Tools: Docker, Git, Android Studio, VS Code, Jira, Vim, Linux

Research Experience

Optimizing Multimodal Deep Learning for Biomedical Signal Classification | *with Prof. Timothy Oladunni* **Present**

- Deep learning with electrocardiogram datasets (ECG) for signal classification using unimodal model (1-DCNN for time, 2-DCNN for time-frequency), multimodal models, and 1D-CNNTransformer.

EmotionCV | *with Prof. Paul Shuangbao Wao* **August 2025**

- Trained FER2013 datasets for emotion recognition and RAVDESS for voice recognition with NLTK and GPT-4o for natural language processing.
- Leveraged pre-trained models for facial recognition, emotion detection and classification with OpenCV, Tensorflow and LSTM.

Sentiment analysis on COVID-19 vaccination Twitter dataset | *with Prof. Timothy Oladunni* **August 2024**

- Performed sentiment analysis on covid-19 datasets using computational methods including TExtBlob, with TF-IDF, LinearSVC and Naive Bayes classification algorithm.

Integrating AI into AR/VR | *with Prof. Carl White* **November 2022**

- Research to develop an immersive integration of AI into Virbela software for advance AR/VR interfaces.

Projects

GENE ID | *Python, HTML, CSS JavaScript, Alphafold Server API* **April 2023**

- Developed a tool to detect cancerous genes in seconds using real-time queries to Alphafold's protein prediction API.
- Won Best Health Hack and Best Use of Ripple Tech at a regional hackathon (team of 4).

ML Stock Prediction Model | *LSTM, CNN, Tensorflow* **August 2024**

- Built a supervised learning model using linear regression (scikit-learn) with AAPL datasets achieving 98% prediction accuracy.

BitFit | *Kotlin, Android Studio* **November 2024**

- Created an Android application using Kotlin and Android Studio for tracking health metrics through Food Calories.
- Implemented UI Views (BottomNavigation, Drawer Layout, Top Bar) enabling seamless navigation between fragments

metFriX | *HTML, CSS & JavaScript, mySQL* **October 2024**

- Built a Netflix-style streaming platform demo with multi-user account types using object-oriented design and MySQL-backed user management.

Awards & Honors

- Academic Trailblazer Award
- Boeing Immersion Scholar
- Williams & Lanaea Featherstone Scholarship
- Thurgood Marshall / Nike HBCU Scholarship
- UNCF STEM Excellence Scholarship
- Dean's List - All Semesters
- AWS AI/ML Scholarship
- Goldman Sachs Market Madness
- Apple Pathway Alliance
- Maryland State Academic Award

Clubs & Organizations

- National Society of Black Engineers
- MSU Rocketry Club
- African Students Association
- Association of Computing Machinery
- Tau Sigma Honor Society
- Society for Advancement of Computer Science
- Organization of Black Aerospace Professionals