Michael C. Anoruo

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EDUCATION

University of Maryland, Baltimore County (UMBC) — Baltimore, MD
B.S., Computer Science (AI/ML track); *GPA: 4.0* — Expected: December 2023

Relevant Coursework: Calculus I-II, Data Structures, Linear Algebra, Operating Systems, Machine Learning, Intro to AI, Algorithm Design & Analysis, Software Engineering I, Computer Vision, Data Science, Natural Language Processing

HONORS / AWARDS

NIDA EDUCATE Scholar — Fall 2021 – Present
Meyerhoff Scholar — Fall 2020 – Present
President's List — Fall 2020 – Present
Google CS Research Mentorship Program Scholar — Spring 2022
MIT Quantitative Methods Workshop — Winter 2022
National Football Foundation Scholar Athlete — Spring 2020

SKILLS

***Programming Languages*:** Python, C++, Lua, JavaScript, C, C#, R
Systems: Ubuntu, Debian, Windows, Unix, Kali Linux, High-performance Computing Clusters (SLURM)
Software: ROS, KiCad, Arduino IDE, Git/GitHub, Jira, Jupyter Notebook, VirtualBox, SQL, Machine Learning libraries

RELEVANT EXPERIENCES

UMBC (*DPrime.ai Lab*): *Data Scientist Intern* — Baltimore, MD — 12/2022 – Present
- Assisted in developing machine learning algorithms to analyze eye-tracking data and identify patterns linked to cognitive events.
- Developed software for real-time visualization of data collected from various biometric sensors.

Acquired Skills: Computer Networking, Database Management, HPC, Data Analysis and Visualization

Apple Inc. (*Apple Service Engineering*): *Data Engineer Intern* — Seattle, WA — 5/2023 – 8/2023
- Developed code that worked with large volumes of video content, utilizing computer vision and machine learning techniques to automate video analysis processes.
- Created various analysis tools that helped data engineers optimize their viewership reporting algorithms.

Acquired Skills: Video Processing, Multithreading & Parallel Processing, Feature Matching, and Image Classification

MIT (*Space Enabled Media Lab*): *Zero Robotics Team Member* — Cambridge, MA — 6/2022 – 8/2022
- Optimized PID controller parameters for the MIT Astrobee robot simulator.
- Developed Python scripts to automate data collection and analysis for the Zero Robotics project.

Acquired Skills: Controls Engineering, Simulation Test and Calibration, and Data Automation

UPENN (*Scalable Autonomous Robots Lab*): *Robotics Research Intern* — Philadelphia, PA — 6/2021 – 8/2021
- Created a PCB with KiCad to translate RS232 to USB for data transmission.
- Developed simulation framework in Python to simulate Autonomous Surface Vehicles (ASV) experiments.
- Designed waypoint algorithm to generate strategic path for lab's ASV to survey Schuylkill River.

Acquired Skills: Robotics Development Framework, Electronic Design Automation, and Simulation Analysis and Design

UMBC (*Ebiquity Lab*): *Cybersecurity Research Intern* — Baltimore, MD — 9/2020 – 5/2022
- Designed reinforcement learning algorithm to find vulnerabilities in malware classifiers by modifying malicious files to avoid detection.
- Annotated cybersecurity related texts to train machine learning algorithm to detect. and classify such phrases.
- Designed algorithm to identify vulnerabilities given a particular operating system.

Acquired Skills: Reinforcement learning, Natural Language Processing, Virtual Machines, and Computer Security

CONFERENCES / PRESENTATIONS

Apple Service Engineering Intern Spotlight	Summer 2023
MSRP Summer Research Symposium	Summer 2022
NSA On-Ramp Mission Research Symposium	Spring 2022
Undergraduate Research and Creative Achievement Day (URCAD)	Spring 2022
University of Pennsylvania SUNFEST Symposium	Summer 2021
Future Business Leaders of America State Conference (Coding & Programming)	Spring 2020

PUBLICATIONS

Piplai, A., **Anoruo, M**., Fasaye, K., Joshi, A., Finin, T., & Ridley, A. (2022, December). Knowledge guided two-player reinforcement learning for cyber attacks and defenses. In *2022 21st IEEE International Conference on Machine Learning and Applications (ICMLA)* (pp. 1342-1349). IEEE.

PERSONAL PROJECTS

Roblox (*Indie Game Development Team*): *Software Engineer* Remote

- Created different analytical tools to track asset engagement and popularity. Summer 2021 – Winter 2021
- Served as the lead developer for fast past action game accumulating close to 1 million players.
- Developed several dynamic and interactive Graphical User Interfaces for various games.

Acquired Skills: Databases, GUI design, 3D Modeling & Animation, Physics Engine, Object Oriented Programming

EXTRACURRICULAR AND VOLUNTEER ACTIVITIES

Meyerhoff Peer Advisor	Fall 2022 – Present
Church Youth Leader	Fall 2021 – Present
National Society of Black Engineers (**Executive Board**)	Fall 2021 – Present
Church Media Department	Summer 2018 – Summer 2023
Creative Coders	Spring 2023
System Administration and Software Development Club	Fall 2020 – Spring 2023
Institute of Electrical and Electronics Engineers	Fall 2020 – Spring 2023
NSBE Junior MESSA Competition Coach	Fall 2021 – Spring 2022
Cyber Dawgs	Fall 2020 – Spring 2022
Pathfinders Club Counselor	Summer 2019 – Spring 2022
Arbutus Achievers Tutoring Program	Fall 2020 – Spring 2021