Amaad Martin

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EDUCATION

Carnegie Mellon University 2025 | Pittsburgh, Pennsylvania, United States
Incoming 5th-year **MS Machine Learning** 2025 (January 2025 - December 2025)

Carnegie Mellon University 08/2021 – December 2024
Pittsburgh, Pennsylvania, United States

BS **Computer Science**
Machine Learning Minor
GPA: 3.54

EXPERIENCE

Software Development Engineer 05/2024 – 08/2024
Amazon Seattle, Washington, United States
- Built **Internal API** for diagnosing large amounts of stuck workflows in parallel
- Integrated API into **Automatic DJS job** for automated diagnosis
- Classified around **3000** workflows and moved them to granular buckets speeding up root cause discovery by **25x**

Software Development Engineer 05/2023 – 08/2023
Amazon Seattle, Washington, United States
- Created **an ECS Fargate service** using **AWS** to help internal customers
- Implemented new **API** to **automate internal process** for external teams
- Cut down process time from **2 weeks** to **2 minutes**
- Integrated existing CLI commands into **easy-to-use UI** using **Ruby and Javascript**

UNIVERSITY RESEARCH

Professional Job Agent 10/2024 – present
- Supervised by Graham Neubig and Daniel Fried.
- Large-Scale Automation of Professional Jobs with **Agents**.
- Creating benchmark to evaluate **Computer Agents** in performing common job tasks

ReVL: Recursive Visual Language Model 02/2024 – present
- Research under Prof. Matt Gormley of the Machine Learning Department
- Adding **Recursive Inductive Bias** to Large Visual Language Model to improve desktop control task
- Fine-tuning the QwenVL **Open Source Large Visual Language Model**
- Achieved **86%** performance of prior paper with **10%** of the data

Reinforcement Learning Car 09/2023 – present
- Research under Prof. Matt Gormley of the Machine Learning Department
- Integrating **DayDreamer** algorithm into remote controlled **Rasberry Pi car**
- Architecting **demonstration** of Reinforcement Learning for students of 10-301/601 (Intro to ML)
- Attempting to train optimal agent in under **6** hours

PROJECTS

Artemis: Autonomous Desktop Agent
05/2024 – 07/2024
- Created **Autonomous Desktop Agent** using **OpenAI API**, **PyAutoGUI**, and **ReVL** that completes a desktop task given a natural language description
- Iterated on plan, act, react framework introduced in **ScreenAgent** Paper
- Hosted **ReVL** model on **Hugging Face Inference Endpoints**

GenStudio: Generative Tools for Producers
11/2023 – 01/2024
- **Generative Sample Library:**
  - Developed **react** website for **generating samples** given a text input
  - Connected **Meta's MusicGen API** for generation
  - Accepted for **YCombinator** Interview
- **Copilot for Mixing and Mastering:**
  - Implemented Digital Audio Workstation **plugin** using the **JUCE** Framework
  - Utilized **OpenAI Assistants API** to control audio effects

doidVerse: Real-Time Evolution Simulator
05/2022 – 08/2022
- Created a real-time **Evolution Simulator** in **C#** with **Unity3D**
- Implemented **NEAT (NeuroEvolution of Augmenting Topologies)**
- Designed **procedurally generated maps** utilizing **cellular automata**
- Combined **200+** hours of work, **2000+** lines of code

COURSES

11-777 (Multimodal Machine Learning)

10-707 (Advanced Deep Learning)

10-703 (Deep Reinforcement Learning)

10-623 (Generative AI)

15-451 (Algorithm Design and Analysis)

15-418 (Parallel Computer Architecture and Programming)

10-315 (Intro to Machine Learning)

15-213 (Intro to Computer Systems)

AWARDS

Dean's List (Spring 2023, Spring 2024)

ORGANIZATIONS

ColorStack
Operations Chair (E-Board)

Carnegie Mellon Black Male Collective
Organization Collaboration & Small Events Chair (E-Board)

National Society of Black Engineers

SPIRIT Black Student Organization

LANGUAGES / FRAMEWORKS

- C
- C++
- Python
- Java
- Git
- Pytorch
- React
- Hugging Face