

# Amaad Martin

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## EDUCATION

**Carnegie Mellon University** 12/2025 | Pittsburgh, Pennsylvania, United States  
5th-year **MS Machine Learning** 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
- **Automated internal process** for other SDE employees
- Cut down process time from **2 weeks** to **2 minutes**
- Integrated existing CLI commands into **easy-to-use UI** using **Ruby and Javascript**
- Implemented new **API**

## UNIVERSITY RESEARCH

**ReVL** 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 **Raspberry 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

**GenStudio: Copilot for Mixing and Mastering (Plugin)** 12/2023 – 01/2024

- Pivoted from Generative Sample Library to plugin for producers
- Implemented Digital Audio Workstation **plugin** using the **JUCE** Framework
- Utilized **OpenAI Assistants API** to control audio effects
- Iterated based on feedback from **3 users** to create a product they loved

**GenStudio: Generative Sample Library (Website)** 11/2023 – 12/2023

- Developed **react** website for **generating stems** for a sample given a text input
- Connected **Meta's MusicGen API** using **Replicate**
- Employed **Demucs** Library for stem separation
- Accepted for **YCombinator** Interview

**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)** algorithm to find optimal neural network configuration
- Leveraged **graph neural networks**, with **adjacency list** representations, allowing for mutable neural networks
- Designed **procedurally generated maps** utilizing **cellular automata**
- Optimized search space so optimal configurations are found in **less than 5 minutes**
- Combined **200+** hours of work, **2000+** lines of code

## COURSES

10-707 (Advanced Deep Learning)  
10-703 (Deep Reinforcement Learning)  
10-623 (Generative AI)  
10-315 (Intro to Machine Learning)  
15-281 (Artificial Intelligence: Representation and Problem Solving)  
15-451 (Algorithm Design and Analysis)  
15-210 (Parallel and Sequential Data Structures and Algorithms)  
15-418 (Parallel Computer Architecture and Programming)  
15-213 (Intro to Computer Systems)

## 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
• LaTeX	• Git	• Mockito	• Pytorch
• Spring	• AWS	• OpenAI API	• React
• Hugging Face	• Weights And Biases	• NumPy	• Unix Command Line