Amaad Martin

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in linkedin.com/in/amaadmartin   ◯ github.com/AmaadMartin

EDUCATION

Carnegie Mellon University   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 Stuck Workflows
- Integrated API into **Automatic DJS job** for Automated Diagnosis
- Incorporated **Amazon Bedrock Gen AI** for **LLM Diagnosis** of Workflow

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 **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

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