SAMI AMER

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OBJECTIVE

Hardworking, collaborative MIT graduate with professional industry experience interested in a full-time position developing software starting in Summer 2023.

EDUCATION

Massachusetts Institute of Technology   Cambridge, MA ● 2019 – 2023

B.S. Computer Science & Cognitive Science
Relevant Coursework: Algorithms, Data Structures, Discrete Math, Machine Learning, Artificial Intelligence, Statistics
Cumulative GPA: 4.6 / 5.0

EXPERIENCE

MIT Mobile Technology Lab, Research Intern   Cambridge, MA ● Sep 2022 – present

- Developing a Django server to deliver audio files to users, track analytics, and securely store user info in PostgreSQL database.
- Migrated development and production environments to Docker.
- Achieved 80% smaller Docker image size using multi-stage builds.

IBM, Backend Software Engineering Intern   Cambridge, MA ● Jun – Aug 2022

- Independently reduced build times for international team & enterprise customers by up to 400% with Docker.
- Developed and deployed a containerized Python app from start to end, with full testing suite; published for use with IBM's premier enterprise security solution, 15+ downloads.

MIT LIDS, Research Intern   Cambridge, MA ● Sep 2021 – Jun 2022

- Created a full stack Python application with GUI to expedite RNA sequencing for Mass. Gen. Hospital researchers.

Learn Ventures, Software Engineering Intern   Cambridge, MA ● Winter 2020 & Summer 2021

- Developed a data simulator for testing image registration and a unit-testing suite for the company's Starfish pipeline.
- Created, tested, and integrated Python-based image processing pipelines for reading and compiling cellular data from microscopic images.

MIT Media Lab, Personal Robotics, Research Intern   Cambridge, MA ● Feb – Aug 2020

- Used Python and FFMPEG to automate the edit, sync, and render of research videos; made process over 10x faster.

PROJECTS

Twitter Auditor: Using the Blockchain to Hold Public Officials Accountable   Sep 2021 – Aug 2022

- Created an open-source tool to track tweets by public officials, committing them to Postgres & local blockchain.
- Scales to 500+ users, 30+ tweets per second with no performance loss, using system and object-oriented design principles.
- <u>Relevant tools:</u> Rust, Python, blockchain, AWS, relational database management, PostgreSQL, Docker

Improving Art Style Classification through CNN Re-training and Diverse Data   Feb – May 2022

- Implemented and improved the methods of Lecoutre *et al.* 2017, which introduced a CNN to classify artistic style.
- Outperformed the original paper by 5%.
- <u>Relevant tools:</u> Python, PyTorch, TensorFlow

Intercellular Signaling Patterns in Progression of Alzheimer's Disease (AD)   Feb – May 2022

- Strengthened connection between aging and AD through cell-cell communication data.
- Achieved 90% faster load times with custom caching and concurrency scripts in Python.
- <u>Relevant tools:</u> Python, R, data modeling

SKILLS

Programming

Python ● Rust ● Go ● C++ ● Swift ● R ● JavaScript

Software Expertise

Docker ● PostgreSQL ● Unit Testing ● CI/CD ● AWS ● Kubernetes ● Django ● Qt (GUI) ● PyTorch ● REST APIs ● TensorFlow ● Git ● Linux ● Jupyter ● JIRA ● Distributed Ledgers ● Async ● Redis