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

B.S. in Computer Science & Cognitive Science
Expected Graduation May 2023

Relevant Coursework: Algorithms, Data Structures, Discrete Mathematics, Machine Learning, Artificial Intelligence, Statistics

Cumulative GPA: 4.6 / 5.0

PROJECTS

Twitter Auditor: Using the Blockchain to Hold Governments and Public Officials Accountable

- Released open-source code that allows anyone to track past tweets from public officials and commit them to a distributed ledger.
- Relevant tools: Rust, Python, Hyperledger (Blockchain), AWS, object-oriented design, relational database management, PostgreSQL

Improving Art Style Classification through CNN Re-training and the Introduction of Diverse Data

- Implemented and improved the methods of Lecoutre *et al.* 2017, which introduced a CNN to classify artistic style. My implementation outperformed the original paper.
- Relevant tools: Python, PyTorch, TensorFlow

Intercellular Signaling Patterns in Pathological Progression of Alzheimer's Disease (AD)

- Discovered a promising link between cell-cell communication and AD progression. Found stronger connection between aging and AD.
- Relevant tools: Python, R, data modeling

SKILLS

Programming

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

Software Expertise

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

WORK & RESEARCH EXPERIENCE

MIT Mobile Technology Lab | Software Engineering Research Assistant

September 2022 – Present | Cambridge, MA

- Developing a Django server to deliver audio files to users, track analytics, and securely store user info in PostgreSQL database.
- Migrating the dev and production environments from a Python virtual env to Docker; further optimizing with multi-stage builds.

IBM | Back-End Software Engineering Intern

Summer 2022 | Cambridge, MA

- Independently designed, created, deployed, and tested Python-based containerized apps for use with IBM's SOAR and premier enterprise security solution.
- Sped up Docker workflow for the team by up to 400%.

MIT Laboratory for Information & Decision Systems (LIDS)| Software Engineering Research Assistant

September 2021 – June 2022 | Cambridge, MA

- Created Python libraries and a GUI for RNA sequencing to facilitate the conversion of raw data to results, without requiring intimate computational knowledge from doctors.

Learn Ventures | Software Engineering Intern

Winter 2020 & Summer 2021 | Cambridge, MA (Virtual)

- Solely in-charge of the company's move from 2D to 3D registration.
- Developed a data simulator for testing image registration, as well as 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 Group | Software Engineering Research Assistant

February – August 2020 | Cambridge, MA

- Used Python and FFMPEG to reduce time to edit, sync, and render videos by 100%