

SAMI AMER

✉ samiamer@mit.edu

🌐 [sami-amer](https://sami-amer.github.io)

☎ 614-962-3317

🌐 www.sami.ps

EDUCATION

Massachusetts Institute of Technology

B.S. in Computation & Cognition (MIT's joint program in Computer Science & Brain Science)
Expected May 2023 | Cambridge, MA
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.
- Skills: Rust, Python, Hyperledger (Blockchain), AWS

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.
- Skills: 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, as well as strengthening the connection between aging and AD.
- Skills: Python, R

SKILLS

Programming

Over 100,000 lines: Python3
Over 10,000 lines: Rust • MATLAB
Over 1,000 lines: Swift • R • C++

Software Expertise

PyTorch • TensorFlow • Docker • Git • Jupyter • Qt • Tokio (Async) • Distributed Ledgers • AWS • Unix • PostgreSQL • Redis • REST APIs • Kubernetes

RESEARCH & WORK EXPERIENCE

IBM | Back-End Software Engineering Intern

Summer 2022 | Cambridge, MA

- Independently designed, created, deployed, and validated Python-based containerized apps for use with SOAR, IBM's premier enterprise security solution.
- Worked under Mark Scherfling, IBM Security SOAR Engineering Manager.

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

September 2021 – June 2022 | Cambridge, MA

- Created Python libraries for RNA Sequencing Data to facilitate the conversion of raw data to results, without requiring intimate computational knowledge from doctors.
- Worked under Prof. Devavrat Shah, principal investigator of MIT Foundations for Data Science. Worked in collaboration with Massachusetts General Hospital and Dana-Farber Cancer Research Center.

Learn Ventures | Software Engineering Intern

Summer 2021 & January 2022 | Cambridge, MA (Virtual)

- Solely in-charge of the company's move from 2D to 3D registration. Implemented scale-invariant feature transform (SIFT) and other 3D volume registration techniques in Python and C++.
- One of the lead developers of a data simulator for testing image registration. One of two lead developers in charge of unit testing for the company's Starfish database.

MIT Media Lab, Personal Robotics Group | Software Engineering Research Assistant

February – August 2020 | Cambridge, MA

- Created essential Python scripts to extract and sort video data and edit, sync, and render videos.
- Worked under Prof. Cynthia Breazeal, founder of Personal Robotics, and Dr. Sharifa Alghowinem.

Learn Ventures | Software Engineering Intern

August 2020 – February 2021 | Cambridge, MA (Virtual)

- Created, tested, and integrated Python-based image processing pipelines for reading and compiling cellular data from microscopic images.
- Additionally, designed and programmed virtual courses on computational neuroscience from scratch, focused on more efficiently bringing teaching to the online platform.