SAFA SHAIKH

https://safashaikh.github.io/portfolio | GitHub: https://github.com/safashaikh
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EDUCATION

Columbia University School of Engineering — New York, NY
Master of Science in Computer Science – Machine Learning **GPA: 3.8** — May 2022

Rutgers University School of Engineering — New Brunswick, NJ
Bachelor of Science in Electrical and Computer Engineering **GPA: 3.9** — May 2019
Bachelor of Arts in Computer Science

WORK EXPERIENCE

Lockheed Martin — Remote
Senior AI & Machine Learning Engineer for AI Factory — March 2022 - Present

- Built internal operations CLI to automate deployments for ML workspaces, jobs (Ray and k8s), data volumes, data pipelines, etc
- Tested and hosted latest open source ML models, including LLMs such as Mistral and Llama models, on internal server for developer usage e.g. Segment Anything -- enabled bounding box, point and segment everything options through a hosted KServe instance
- Built finetuning as a service pipeline using Flyte and a hosted Lorax server
- Hosted KServe and TGI models on Foundation Model Platform
- Deployed Trino instance on Kubernetes to query over multiple internal databases
- RAG pipelines with internal data

Lockheed Martin — Moorestown, NJ
Software Engineering Intern, Associate Software Engineer, Software Engineer I & II (AI/ML) — May 2017 - July 2019, July 2019 – March 2022

- Worked on OASIS Simulation Training Product for Aegis Weapons System (AWS) (C++ code)
- Built and maintained prediction algorithm libraries for internal developers
- Led the prediction team as part of greater R&D efforts
- Data preparation and preprocessing

PreCalculus Tutor — New Brunswick, NJ
Private Tutor — July 2016 - August 2016

- Taught high school students the fundamentals of function analysis, limits, and function characterization.

RESEARCH EXPERIENCE

NeuroImaging Laboratory at Rutgers University with Dr. Laleh Najafizadeh — New Brunswick, NJ
Research Assistant — May 2016 - July 2016

- Researched Brain-Computer Interface (BCI) paradigms - provide a neural pathway for the human brain to interact with a computer program or robot in order to stimulate motor activity; Constructed brain caps compatible with the Functional Near-Infrared Spectroscopy (fNIRS) machine and the electroencephalogram (EEG).

TECHNICAL SKILLS

Environments: PaaS (OpenShift), Linux, macOS, Windows

Languages (On scale of 0-10 where 10 is most proficient)

- Python (10)
- Java (8)
- TypeScript (3)
- C++ (7)
- YAML (6)
- SQL (8)
- JavaScript (3)
- HTML (6)
- CSS (6)
- XML (6)
- JSON (8)

Development

Artificial Intelligence, Machine Learning, DevOps, Agile Development, Big Data, Data Analytics, Object-Oriented Programming

Frameworks/Tools

REST, TensorFlow, SciKit Learn, PyTorch, Keras, Kserve, TGI, HuggingFace, Django, Kafka, GitLab, KubeFlow, Spark, Trino, Git, OpenShift, Docker, AWS, Angular, MongoDB, SQL Server, MySQL, PostgreSQL, VI/Vim

RELEVANT COURSEWORK

- Systems Programming
- Data Structures
- Computer Architecture
- Databases
- Probability and Rand. Proc
- Linear Systems and Signals
- Software Engineering
- Digital Sys Design (FPGAs)
- Robotics & Comp Vision
- Electronic Devices
- Principles of Electrical Engineering I & II
- Artificial Intelligence
- Machine Learning
- **Capstone Design –** Lip Reading Android App with Neural Networks https://www.youtube.com/watch?v=ubPe-gHJ0JU

HONORS

School of Engineering Dean's List *GPA: 3.9*, **Engineering Honors Academy, Tau Beta Pi, Society of Women Engineers**