

Farah Saeed

farahsaeedsiddiqi@gmail.com • +92 301 3693333

EXPERIENCE

Doctoral Scholar

University of Georgia

Athens, GA, USA
Aug 2019 – July 2025

- Disease situation estimation in time series modality via foundation model.
 - Pretraining foundation models, including PatchTST network with transformer modules from scratch.
 - Finetuning LLMs via PEFT techniques covering QDoRA and QLoRA.
 - Fine-tuning Llama 3, Llama 2, Tiny Llama, and GPT with QDoRA and QLoRA.
 - Tailoring LLMs and complementing with other network modules to enhance public health outcomes.
 - Retrieval augmented generation RAG for time series data with vector database.
 - Utilized machine learning to evaluate single-cell perturbations via gene expression changes.
- PeanutNeRF: Neural Radiance field for 3D reconstruction of peanuts.
- Deep learning related state action recognition for blemished onion sorting robot.
- Python, Pytorch, Hugging face, Pgvector, FAISS, Scikit-learn

Data Scientist

Jazz PMCL

Islamabad, Pakistan
Feb 2017 – July 2019

- Conducted advanced telecom dataset analysis for customer value management across 40M+ users.
- Derived customer behavioral profiles using k-means clustering.
- Remodeled customer engagement forecasting and churn prediction.
- Designed and monitored jobs on the Hadoop Cluster.
- Visualized and analyzed large-scale dataset for data driven decision making.
- SQL, Spark, Pyspark, Python, TensorFlow, Scikit-learn, Tableau

Application Engineer

LMK Resources

Islamabad, Pakistan
June 2016 – Feb 2017

- Developed seismic-data interpretation software modules in scrum team.
- C#, WPF, Team foundation server

RESEARCH

- LLM4cast: Repurposed LLM for Viral Disease Forecasting. (BigData 2024)
- A survey of deep learning and foundation models for time series forecasting. (Preprint)
- PeanutNeRF: 3D radiance field for peanuts. (CVPRw 2023)

PROJECTS

Naymat Khaana – Food Wastage Reduction app

- A mobile app for the utilization of surplus food items.
- Reduce wastage of food.
- Flutter, Android, Google ML kit
- Imagine Cup 2023 world finalist earth category.

Global Wheat Detection – Object Detection

- Wheat head detection from different regions of the world
- Using EfficientDet and Yolov5 object detection algorithm
- Libraries: Pytorch

Research Assistant AI agent

- Developed a research assistant ai agent powered by Claude LLM.
- Researches on user defined topic.
- Utilizes tools including Wikipedia and search engine and saves results when requested.
- Libraries & tools: Langchain, Pydantic, Claude, Python

Hospital Resource Optimization

- Decision making agent
- Generation of policy for using limited hospital resources
- Using Markov decision process
- Languages: Python

Intelligent Image Searching [Demo](#)

- Face Recognition: Identifying photos of a particular person
- Image Classification: Identifying Indoor, outdoor, night, and day photos
- Transfer learning from VGG faces and MIT places CNN.
- Python, Caffe, QT

EDUCATION

National University of Computer and Emerging Sciences

BS in Computer Science

Islamabad, Pakistan
Aug 2012 – May 2016

Final Year Project: Intelligent image searching

University of Georgia

PhD in Computer Science

Athens GA, USA
Aug 2019 – July 2025

ACTIVITIES

- Open Source Contribution to Scikit-Learn. (<https://github.com/FarahSaeed>)