SHEHRYAR HANIF

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EDUCATION

New York University — Abu Dhabi, UAE & New York City, USA
BS in Computer Science, BS in Mathematics — Aug. 2019 − May 2023
Class Rank: Magna Cum Laude CGPA: 3.987/4.000
Relevant Coursework: Applied Internet Technology, Data Management and Analysis, Natural Language Processing, Parallel Computing, Operating Systems, Computer Networks, Algorithms, Data Structures, Linear and Nonlinear Optimization

PROGRAMMING SKILLS

Skilled In: **Python** (Including **Scikit-learn**, **NLTK**, **Pandas**), **JavaScript\TypeScript** (Including **Express.js**, **Node.js**), **React** (Including **Hooks**, **Redux**, **Routers**), **PostgreSQL\MySQL**, **GCP**, **HTML**, **CSS** (Including **Bootstrap**)
Familiar With: **C++\C** (Including **MPI**, **OpenMP**, **CUDA**), **MATLAB**, **R**, **MongoDB**, **AWS**, **Heroku**, **Firebase**

PROFESSIONAL EXPERIENCE

Software Development Engineer 2 — Dec. 2024 − Present
Software Development Engineer — Jun. 2023 − Nov. 2024
noon — Dubai, UAE
- Develop the backend for noon Food's marketplace system, specializing in catalog, search, and content management system(s)
- Lead engineering for **search** (achieved ∼**10% CTR improvements**) and **ad monetization** (**boosted revenue by** ∼**6%**), optimizing performance and predictive systems using **Python**, **Solr**, and **MySQL**
- Optimize query performance for **Google Cloud Platform (GCP)** tools, including **BigQuery** and **Spanner**

Data Science Intern — Jun. 2022 − Aug. 2022
Selesnick Lab @ NYU Tandon School of Engineering — New York City, USA
- Optimized and parallelized **MATLAB** program for pair-sparse signal recovery, while simultaneously prototyping potential improvements for the base algorithm in **Python** (particularly **Scikit-learn** and **NumPy**)
- Visualized stepwise recovery process by using **Matplotlib** for **Python** and in-built plotting library for **MATLAB**
- **Improved recovery accuracy by** ∼**50 %** for common use cases involving a signal-to-noise ratio of about 100

Full-Stack Development Intern — Jun. 2021 − Nov. 2021
Frich — New York City, USA (Virtual)
- Devised, designed, and developed web application for student recruits to register, log users, and chart progress through college ambassador program
- Built back-end **REST API** in **Express.js**, and served **MySQL** data to custom-built **React** application through **React Routers** with **Axios**
- Implemented **JWT** authentication, designed UX interface, and maintained hosting on **Heroku** with **AWS** (**RDS**)

RESEARCH EXPERIENCE

Machine Learning Research Assistant — Apr. 2021 − May 2023
New York University Abu Dhabi — Abu Dhabi, UAE
- Implemented custom **Python** adaptation of **GPT-J** language model by using **PyTorch**, **Scikit-Learn** and **TensorFlow**, with testing indicating **accuracy improvement of** ∼**15 %**
- Web-scraped, cleaned, and analyzed code snippets and explanations from online tutorial websites (e.g., geeksforgeeks.com) to build novel consolidated dataset for **Python** and **Java** text-code pairs

Data Science Research Assistant — Sep. 2020 − Aug. 2021
New York University Abu Dhabi — Abu Dhabi, UAE
- Cleaned up 10+ datasets and conducted quantitative analysis (e.g., linear regression models, convex hull construction) by using **Python** (particularly **Pandas**, **NumPy**, and **Beautiful Soup**) and **R** (particularly **dplyr**, **ggplot2**, and **Shiny**)
- Fuzzy-matched and geo-mapped election polling stations in Malawi to identify voting irregularities and incidence of fraud

PROJECT WORK

Extractive Text Summarizer for COVID-19 Medicinal Articles | bit.ly/3IRR9KO — Nov. 2021 − Dec. 2021
- Developed **Python** program that extracted machine-produced summaries of COVID-19 research articles through modified implementations of **BERT** and **Word2vec** vectors built using **NLTK** and **Scikit-learn**
- Designed and implemented custom **TF-IDF** vector generation technique that gave greater weightage to medical terms produced through the open-source **Termolator** tool
- Achieved **precision and recall improvement of** ∼**6 %** over established baseline approaches (e.g., random sampling)

AWARDS AND HONORS

Intern of the Month (July 2021) *Frich* — Jul. 2021
Top 10 in Pakistan, National Mathematics Talent Contest *Higher Education Commission* — Dec. 2018