

SHEHRYAR HANIF

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EDUCATION

New York University

BS in Computer Science, BS in Mathematics

Abu Dhabi, UAE & New York City, USA

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 improvement**) 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](https://www.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