Rounak Saraf

LinkedIn | GitHub | LeetCode
+91-9354570424 | rounaksaraf.official@gmail.com

EDUCATION

IIIT, DELHI
BTech in ECE
July 2018 - Present | New Delhi
Cum. GPA: 8.3 / 10.0

DPS, RUBY PARK
Grad. May 2018| Kolkata, India
Grade: 92.4%

LINKS

Github:// rounak183
LeetCode:// rounak08
CodeChef:// rounak

COURSEWORK

UNDERGRADUATE
Data Structures & Algorithms
Machine Learning
Artificial Intelligence
Linear Algebra
Systems Management
Engineering Design
Advanced Programming
Probability & Statistics
Operating Systems
Natural Language Processing

SKILLS

PROGRAMMING
Proficient:
Python • Java • Matlab • LaTeX
Linux • Verilog • Git • HTML
Familiar:
C • C++ • Bash • MySQL • Flask
• Rest API • React • CSS
• JavaScript • Django •Prolog

TECH STACK

DATA SCIENCE & DISTRIBUTED SYSTEMS
Spark SQL • PySpark • Pandas
• Dask • Scikit-Learn • Scipy
• Apache Spark Compute

OPERATING SYSTEMS & DESIGN
•Linux •Windows • JavaFX
•Eagle CAD •Fusion 360 •Eclipse

COMPUTER NETWORKS
Cisco Packet Tracer

EXPERIENCE

SYNOPSYS | Data Engineering Intern
May 2021 – Present | Bangalore, Karnataka,India

- **Web** : Created a mailing system to provide instructions to the assigned employee of a **JIRA** issue for obtaining access to the code base using **web scrapping** and **web API** mechanisms. Integrated a weekly reminder system.
- **Data and Distributed Systems** : Programmed a congestion analysis feature running on a distributed compute framework using **PySpark** and **Pandas**. Designed the feature determining the density and intersection of two specific IC components in the IC design. Used Convex Hull algorithm for the implementation.
- **Workflow Management** : Created a dependency between the congestion analysis feature added and the system using **Apache Airflow** reflecting the functionality and conditional inclusion of the feature.

PROJECTS

ARTIFICIAL INTELLIGENCE | Undergraduate Researcher
Aug 2020 – Dec 2020 | New Delhi, India

- **Career Advisory System** : Designed a system providing the best career options for a student considering students interests, skills and other relevant attributes provided as input by the user.
- **Best First Search** : Implemented the algorithm with the most optimal time and space complexity. Programmed the algorithm for finding out the minimum distance between any two cities (vertices) in a country (graph) using heuristics.
- **Natural Language Interface** : Created an interactive user interface for the career advisory system using **Natural Language Toolkit** (nltk).

NATURAL LANGUAGE PROCESSING | Undergraduate Researcher
Aug 2020 – Dec 2020 | New Delhi, India

- **Twitter Sentiment Analysis System** : Led a team of 2 for creating a classification system on sentiments of a tweet. Implemented and compared various computational models on **25** features achieving a maximum accuracy of **78%**.
- **Viterbi Algorithm** : Implemented the Viterbi algorithm for word-tag definition from scratch. Obtained results for the Bigram and the Trigram model with **87.1%** and **89.5%** accuracy respectively.

GENERAL PROGRAMMING | Undergraduate Researcher
Aug 2018 – Dec 2018 | New Delhi, India

- **Weather Prediction App** : Developed an app which displays the real-time temperature, humidity and other meteorological factors using the **weather API**. Thoroughly tested the app using python **unit-test** framework.

GAMES AND GRAPHICS | Undergraduate Researcher
Aug 2019 – Dec 2019 | New Delhi, India

- **Plants Vs. Zombies** : Developed a fully functional Plants vs Zombies game from scratch built on **JavaFX** platform.

ACHIEVEMENTS & LEADERSHIPS

2019	Achieved Rank 8	Intra-College technical Hackathon
2018	All India Rank 4,936/1,050,000	JEE Mains (world's biggest competitive exam)
2020	Teaching Assistant (MTH 204)	Taught and graded a class of 260 students
2019	Taekwondo Gold Medallist	IIT BHU Sports Fest (India's Biggest Sports Fest)