Mihir Kumar

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EDUCATION

Indian Institute of Technology, Delhi **IIT-Delhi | Jul 2016- July 2020**

BTech. in Electrical (Power and Automation) Engineering

Coursework: Intro. To Computer Science, Data Structures and Algorithms, Signals and Systems, Computer Architecture, Digital Image Processing, Probability and Stochastic Probability

WORKEXPERIENCE

GROFERS | Marketing Analyst **Gurugram, IN | Sep 2020 – Sep 2021**

- Analysed data from the monthly business plans and actual stats to identify potential revenue growth opportunities
- Created and maintained a data pipeline to be used by the whole marketing team for their data needs using **Python** on **JupyterHub**. The pipeline updated the database on Redash for further use.
- Designed and implemented multiple dashboards by querying & structuring on **Redash** to visualize valuable data.

CITI CORP | Credit Risk Analyst, Summer Intern **Mumbai, IN | May 2019 - July 2019**

- Made decisions and recommendations about extending lines of credit.
- Studying the impact of multiple Positive actions taken in first 24 months on the customer behaviour over next 2 years

PROJECTS

IMPLEMENTATION OF B-TREES **Java, Data Structures and Algorithms, B-Tree**

Implemented a generic B-Tree to hold key-value pairs with duplicate keys allowed. Data stored could be of any generic type in Java. The B-tree was sorted according to the key values. The B-tree implemented basic class functions like insertion of key-value pair along with searching and deletion of keys.

DATA DEDUPLICATION ON CLOUD STORAGE **Java, Cloud, Chunking, Hashing, Data Deduplication**

Implemented various chunking algorithms, Rabin-Karp rolling hash, and bipartite graphs to study deduplication of data useful for cloud computing to reduce storage overhead due to presence of similar or duplicate data. Researched, designed and analysed fixed length chunking, variable length chunking and probabilistic extreme binning algorithms.

VESSEL SEGMENTATION USING MORPHOLOGY **Python, Digital Image Processing**

Processed a set of images of retina maps, to identify and selectively map the Vessels of the eye. Removed The optic disks, to extract the veins. Smoothed the veins by looking at the contours and selecting them based on relevant conditions. Removed any patches or non-vein patterns.

SOLVING 8-PUZZLE GAME **Java, Dijkstra's Algorithm, Graph Traversal**

A learning Project where I needed to solve the 8-puzzle game. Considering the possible states of the puzzles as nodes and possible moves as edges, a graph was created which represented the puzzle. Traversed this graph to get from a given random start state to an assigned random end state.

SKILLS & ACHIEVEMENTS

Languages: Java, C++, Python, SQL, SAS

Technology: AWS, Eclipse, Arduino, Autodesk, Tina TI, SAS EG, Tectia

All India Rank: Obtained a **rank of 776** out of 1.5 million students across India in **JEE** (**advanced**) over a 2-tier testing process.

SOCIAL VOLUNTEER:

HELPAGE INDIA | Volunteer **Delhi- NCR, IN | Nov - 2019 - Dec 2019**

- Helped abandoned old people without access to medical care in rural regions of the country through Mobile Health Units (MHUs) by providing medical care to their door step. Helped with the record keeping and management here.
- Managed helpdesk of HelpAge India at AIIMS, India's largest hospital by helping out old people with management, documentation, registration, directions, and movement through the whole premises.