Aanchal Sapra

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Profile

Experienced Data Analyst with 3+ years of expertise in translating raw data into meaningful insights with a background of advanced mathematics. Proficient in Python, Machine Learning, SQL, MS Excel, and Statistics, with a proven track record of transforming complex datasets into actionable intelligence. Seeking to delve deeper into machine learning models and contribute to innovative projects within interdisciplinary teams.

Skills

- **Technical Skills : Python, SQL Server, Machine Learning, Power Bi, Quicksight, Advance Excel, R, VBA, SAS, Hadoop, EDA, Mathematics, Statistics, Optimization, Data Analysis, Linear Regression, Logistic Regression, Random Forest, Decision Tree, AWS etc.**
- **Soft Skills : Business Intelligence, Problem-Solving , Critical Thinking, Flexibility, Communication, Teamwork, Leadership, Project Management, Creativity, etc.**

Experience

SENIOR DATA ANALYST | DELHIVERY LTD. | JUNE 2024 – PRESENT

- Collaborated with the network design team to **optimize** the logistics transport network by implementing the Adhoc Vehicle Routing Problem **(VRP)** using **SQL** and **Python**, increasing model alignment with actual routing from **20% to 85%**.
- Implemented an **Operations Research (OR) model** to predict ad-hoc vehicle requirements up to **12 hours** in advance, reducing urgent dispatch costs and improving time efficiency.
- Developed an interactive report for **Vehicle Capacity Planning** with a dashboard to determine optimal vehicle placement and vehicle types, effectively reducing total vehicle costs resulting in average **daily cost savings of nearly 1 lakh (INR)**.
- Designed and implemented dashboards and Key Performance Indicators (KPIs) for vehicle capacity planning across various routes using **Amazon QuickSight**.

DATA ANALYST | EXL SERVICE INDIA | MAY 2022 – JUNE 2024

- Implementing a **risk scoring** system to assess customers' **debt repayment abilities**. Utilized advanced **SQL queries and Python for data analysis**, including **exploratory data analysis (EDA)** and **data visualization** techniques to identify key features and trends in customer debt data. Developed categorization criteria for high, medium, and low-risk customers, facilitating the creation of personalized **repayment plans** based on individual financial situations.
- Undertaken a compelling **data modeling** project to detect theft of electricity and gas for UK base client by looking data-driven leads and usual BAU reports. With a thorough **Exploratory Data Analysis** and using machine learning algorithms like **Logistic Regression, Linear Regression**, etc. I achieved **92% accuracy** rate in identifying potential theft cases.
- Successfully **automated** the data-driven leads generation process using Python libraries like **Pandas**, **NumPy, Seaborn, Matplotlib, etc.** resulting in **30%-time savings** while maintaining **100% accuracy** and efficiency.
- Conducted an **extensive analysis** on meter serial numbers to identify potential theft cases from handwritten notes using various libraries such as **Pandas, numpy, SQLite3, etc.**, later presented on **Power bi dashboard** contributing to a significant **11% increase in client's revenue** that comes from theft identification**.**

Education

- **M.Sc. Mathematics| Hansraj College| Delhi University| 2016-2018 (74 %)**
- **B.Sc. (H) Mathematics| Keshav Mahavidyalaya| Delhi University| 2013-2016 (94%)**
- **XII in Science| S.R.S Sr. Sec. School, Rohtak| 2011-2013 (91%)**
- **Qualified NET-JRF Mathematics| 2019**
- **Certification in French Language| Keshav Mahavidyalaya| Delhi University| 2014-2015 (74%)**

Publications and achievements

- **"Second-order optimality conditions for locally Lipschitz vector optimization problems" – Optimization (Taylor & Francis Group) (2023) – By Aanchal and C. S. Lalitha**
- **"Strong second-order optimality conditions for Geoffrion proper efficient solutions in nonsmooth constrained vector optimization" – Annals of Operations Research (2025) – By Rimpi, Aanchal and C. S. Lalitha**