HARSH GUPTA

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SKILLS

PROGRAMMING LANGUAGES
Proficient
• Python
Familiar
• C/C++ • MATLAB

DATABASE TECHNOLOGIES
Proficient
• SQL Server • MongoDB Server

ML LIBRARIES
Proficient
• Pandas • Scikit Learn
• Keras • Plotly • NLTK • OpenCV

VISUALIZATION TOOLS
Proficient
• Power BI • Excel
Familiar
• Tableau • DOMO

EDUCATION

NIT HAMIRPUR, HP
MSc Math's & Computing
CGPA: **9.21** | **2022**

UNIVERSITY OF DELHI
BSc MATHEMATICS (Hons)
CGPA: **8.31** | **2020**

COURSE WORK

• Linear Algebra • Machine Learning
• Soft Computing • Statistics • Database Management

POR

CORE TEAM MEMBER | DU 2018, 2019.
Coordinated with a team of **15 Members** as a Bursar for the Conducting Mathematical Fest of **450+students**.

OTHER ACTIVITIES

- **Qualified** GATE (Math's) with **93** percentile.
- Participated in KV National Cricket Tournament.
- Secured **2nd Position** in Inter Year Cricket Tournament(MSc)
- Article Published Research Gate

WORK EXPERIENCE

ANALYST MERCADOS ENERGY MARKET INDIA | JUN'22- PRESENT

- Utilized complex SQL queries extensively at for robust data extraction, analysis, optimization, and streamlined operations.
- Developed robust **web scraping** code to extract data from multiple energy sector websites using **Selenium and Beautiful soup.**
- Implemented parallel processing techniques, leading to a **70% reduction** in process execution time.
- Designed **Power BI report**, analyzed key **metrics** (Peak Demand, weather, supply), and presented findings to stakeholders.

PROJECTS

Bihar Load Balancing System | CLIENT | JUN'23- FEB'24

- Collaborated with authorities to understand requirements and challenges, tailoring the system to align with the unique needs of Bihar.
- Programmed Python scripts utilizing **real-time data** for automating power substation **curtailment/revival process**, thus cutting **DSM costs**.
- Engineered a secure backend, integrating diverse **API data** for Bihar power grid adaptability.

ELECTRICITY LOAD FORECASTING (REG.) | CLIENT | JUL'22- DEC'22

- Developed and implemented electricity demand forecasting model for Maharashtra, Uttar Pradesh, Bihar, Madhya Pradesh using **Gradient Boosting**, improved accuracy by **3%.**
- Conducted detailed analysis to identify **seasonal trends, holidays** and **anomalies** inhistorical electricity demand patterns.
- **Communicated forecasted results** and insights to senior management andstakeholders, including recommendations for **optimal resource allocation** and risk management.

AUTOMATED METER READING (CV) | MASTER'S THESIS | JAN'22- MAY'22

- Constructed a cascading model architecture to achieve accurate object detection using dataset of **7000+ meter images**.
- Utilized localized cropped meter images to annotate **10 digits** and trained digitdetection using **YOLOv5.**
- Achieved **99.7%** accuracy in number area identification and **87.8%** accuracy in digit detection.

CERTIFICATIONS

- **Getting Started with AWS Machine Learning**: Learned basis of AWS machine learning services.
- Successfully completed the **SQL for Data Science** course, mastering CRUD operations in SQL.
- Completed **MongoDB** course, specialize in CRUD operations.
- **Foundations: Data, Data, Everywhere**: For Data analysis course offered by google on coursera.
- **Deployment of Machine Learning Model**: End-to-End deployment using Git, CircleCI, and Railway app.