

Dhruvraj Singh Rathore

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EDUCATION

Texas A&M University

Master of Science in Data Science

College Station, TX

Aug. 2024 – Present

SRM Institute of Science and Technology

Bachelor of Technology in Computer Science Engineering

Chennai, India

Jul. 2018 – May 2022

TECHNICAL SKILLS

Programming & Data Science: Python, SQL, R, SAS, Pandas, NumPy, Matplotlib, Scikit-learn, Shell Script

Databases & Cloud Computing: MySQL, DynamoDB, Snowflake, AWS Suite (EMR, S3, EC2, Glue, Lambda)

Big Data & Machine Learning: Spark, PySpark, TensorFlow, PyTorch, LLMs (Large Language Models), BERT, Ollama, LangChain, Statistical Modeling, Hypothesis Testing

Tools & Platforms: Git/GitHub, CI/CD, Power BI, Tableau, Data Build Tool (DBT), Apache Airflow, Docker

EXPERIENCE

Student Research Assistant

School of Public Health, Texas A&M University

Oct. 2024 – Present

College Station, TX

- Conducted **descriptive statistical analysis** on Medicaid data to derive actionable insights using Python and SAS.
- Automated graph generation for project presentations using R, **reducing processing time by 30%**.
- Performed **hypothesis testing using T-tests and Pearson correlation** to identify relationships between target columns, and **utilized Q-Q plots** to analyze distribution similarities across datasets over multiple years.

Data Analyst

Draup Business Solutions

Dec. 2022 – Jun. 2024

Bangalore, India

- Implemented **scalable and robust ETL** data ingestion pipelines with **PySpark and SQL in AWS EMR jupyter notebooks**, enhancing reliability and resulted in a **35% improvement** in end-to-end data integrity.
- Led a **cross-functional initiative** to architect a dashboard, processing 200 million **data checks through Airflow to generate 100+ exceptions**; rapid resolution of production issues.
- Integrated **AWS Lambda with S3 and DynamoDB** to support ad-hoc client data request.

Data Analyst

HighRadius Corporation

Jul. 2022 – Nov. 2022

Hyderabad, India

- Transformed data gathering phase by **simplifying data extraction and preprocessing steps with Python and SQL**, decreasing total time for analysis by **50%**.
- Developed a keyword matching algorithm to automate matching of claims to deductions, yielding **3x increase in net recovery rates and resulting in savings of approximately \$50M**.

Data Scientist

HighRadius Corporation

Aug. 2021 – Jun. 2022

Hyderabad, India

- Collaborated with multiple Fortune 500 CPG companies to facilitate AR work distributions utilizing **time series data in Python, reducing manual efforts by 4 times**.
- Created predictive models for customer payment date patterns leveraging **machine learning regression models, Bagging, and boosting algorithms like LightGBM**, resulting in a **70% increase in model accuracy**.
- Optimized deployed ML models, boosting automation efficiency by 25% and achieving 35% revenue savings

PROJECTS

Cotton Field Detector 🐞 | *Python, CNN, U-NET, Pytorch, Computer Vision*

Oct. 2024 – Nov. 2024

- Developed an automated method to identify and map cotton crop areas from satellite imagery of the United States using UNET algorithms in PyTorch.
- Performed segmented image classification to isolate cotton crops from other vegetation.
- Calculated total cotton acreage by analyzing pixel coverage of masked areas, providing accurate crop area measurements.

Metastatic Cancer Detection 🦠 | *Python, CNN, Pytorch, Git/Github, Neural Networks*

Nov. 2024 – Dec. 2024

- Integrated deep learning model using CNNs to classify metastases in lymph node image dataset.
- Applied data augmentation and batch processing to enhance model generalization and training efficiency.
- Achieved an F1 score of 0.8768, demonstrating high accuracy in automated cancer metastasis detection.