

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

EXPERIENCE

Data Analyst

Draup Business Solutions

Dec. 2022 – Jun. 2024

Bangalore, India

- Developed ETL pipelines using PySpark/SQL on AWS EMR, improving data integrity by 35%.
- 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 streamline real-time data ingestion and storage for **scalable analytics workflows**.

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, increasing net recovery rates 3x and saving approximately \$50M.
- Designed a Power BI dashboard, reducing stakeholder decision-making time by 40%.

Data Science Trainee

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**, resulting in a **70% increase in model accuracy**.
- Refactored already deployed ML models by optimizing accuracy with hyperparameter tuning, leading to a **25% improvement in automation efficiency and 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 histopathological images from the PatchCamelyon (PCam) 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.

Metro Interstate Traffic Volume | *Python, Statistical Techniques, Model Development*

Nov. 2024 – Dec. 2024

- Built a traffic congestion model using scikit-learn, with feature scaling, one-hot encoding, and time-series analysis.
- Applied Random Forest, Lasso, Ridge, Linear, and Polynomial Regression with cross-validation.
- Used pandas, NumPy, Matplotlib, and Seaborn for data analysis; tuned hyperparameters with GridSearchCV.
- Evaluated with RMSE and R-squared; Polynomial Regression showed the best accuracy.

SKILLS

Programming: Python, SQL, Pyspark, R Programming

Database: Postgres, MySQL, MongoDB, DynamoDB, Redis, Snowflake, DBT

Libraries: Pandas, NumPy, Matplotlib, Scikit-learn, PyTorch, TensorFlow, Keras, SciPy, OpenCV

Miscellaneous: Git/GitHub, AWS Suite (EMR, S3, EC2, Glue, Lambda), Airflow, Docker