

# ADITYA RAJ SINHA

DATA SCIENCE STUDENT

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## ABOUT ME

Data Analyst skilled in transforming raw data into actionable insights that support business decision-making. Experienced in SQL, Python (Pandas, NumPy), Tableau, Power BI, statistical analysis, exploratory data analysis, and KPI reporting. Built dashboards, automated data workflows, performed sentiment analysis, forecasting, and financial comparison analytics. Strong ability to analyze large datasets, identify patterns, and communicate insights to stakeholders.

## EDUCATION

Vellore Institute of Technology - AP | 2024-2026

**Master of Science in Data Science - 8.13 CGPA**

Ranchi University | 2019-2022

**Bachelor's of Science in Physics - 8.05 CGPA**

## PROJECTS

### Plant Disease Detection – Image Analytics Project

PyTorch, Transfer Learning, EfficientNet

- Applied transfer learning and augmentation techniques to classify crop diseases using the PlantVillage dataset.
- Conducted model evaluation using confusion matrix, classification report, and visualized training history.

Key Impact: Demonstrated strong capability in supervised learning and image-based data analysis.

### News Research & Analytics Tool – Data & NLP Application

Python, Streamlit, TF-IDF, BM25, Cosine Similarity, LSA

- Designed a text-analysis system that extracts, preprocesses, and ranks news articles using TF-IDF, BM25, and cosine similarity.
- Implemented document similarity scoring and automated summarization to reduce manual review time.
- Created a user interface in Streamlit to allow search, filtering, and real-time relevance evaluation.

Key Impact: Improved information retrieval efficiency by enabling faster review of large volumes of text data.

### HR Analytics Dashboard – Workforce Insights (Tableau)

Tableau, Excel, Data Cleaning, KPI Tracking

- Built interactive dashboards for HR teams to track attrition rate, department-wise performance, and experience distribution.
- Developed dynamic filters and drill-down features to support data-driven workforce decisions.
- Cleaned and transformed raw HR data using Excel and Python for accurate reporting.

Key Impact: Helped stakeholders identify patterns in turnover and performance variations across departments.

### Renewable Energy Forecasting & Optimization

Python, Scikit-learn, Ensemble Models, Time Series Analysis

- Performed EDA on solar and wind datasets to identify correlation between weather conditions and energy output.
- Built ensemble regression models (Random Forest, Gradient Boosting, XGBoost, LightGBM) to forecast energy production.
- Evaluated models using RMSE, MAE, and time-based splitting for reliable forecasting.

Key Impact: Enabled predictive insights that can streamline energy planning and reduce variability in supply estimation.

### Mental Health Survey Analytics – Sentiment Insight Reporting

Python, VADER, NRC Lexicon, Data Visualization

- Conducted sentiment and emotion analysis across demographic groups (age, stress level, occupation).
- Created visual reports to identify trends in mental health concerns and emotional polarity.

Key Impact: Presented insights useful for designing targeted mental health interventions.

## SKILLS

- |                    |                        |                |                 |                      |
|--------------------|------------------------|----------------|-----------------|----------------------|
| • SQL              | • PYTHON               | • EXCEL        | • Data Cleaning | • Hypothesis testing |
| • TABLEU           | • EDA                  | • R            | • Matplotlib    | • Regression         |
| • POWER BI         | • Pandas               | • Scikit-learn | • Data Mining   |                      |
| • Machine Learning | • Statistical Analysis | • TensorFlow   | • NumPy         |                      |

## SOFT SKILLS

- |                                       |                                 |                        |
|---------------------------------------|---------------------------------|------------------------|
| • Analytical Thinking                 | • Communication & Collaboration | • Adaptability         |
| • Problem-Solving & Critical Thinking | • Teamwork                      | • Time Management      |
| • Attention to Detail                 |                                 | • Interpersonal Skills |

## HACKATHON

- Gen AI Hackathon - Winner
- Code Bid
- Codeathon