Aditi Reddy Doma

ad7977@rit.edu | 917-337-7045 | linkedin.com/in/aditireddydoma | GitHub

EDUCATION

Masters of Science in Data Science   ***Expected: December 2026***
Rochester Institute of Technology (*GPA: 4.0*)   *Rochester, New York*
- Relevant Coursework: Software Construction, Applied Statistics, Foundations of Data Science, Database Design, Data Visualization

Bachelor of Technology in Artificial Intelligence   ***July 2020 - May 2024***
Mahindra University (*GPA: 3.2*)   *Hyderabad, India*
- Relevant Coursework: Data Structures and Algorithms, Machine Learning, Big data, Deep Learning, Artificial Neural Networks, Data Mining and Warehousing, Risk Management, High Performance Computing

WORK EXPERIENCE

Graduate Research Assistant   ***May 2025 - Present***
Rochester Institute of Technology   *Rochester, New York*
- Extracted and analyzed **500k+ unstructured legislative profiles** into **AWS DynamoDB** with **S3**, **Glue** and **Lambda** in **Python**, enabling real time updates on party affiliation, state representation, and funding interests.
- Reduced university's research time by **23%** by designing interactive U.S. maps of representative's funding interests in **QuickSight**, allowing quicker identification of aligned politicians and access to new funding opportunities.

Graduate Teaching Assistant   ***January 2025 - Present***
Rochester Institute of Technology   *Rochester, New York*
- Guided 200 undergraduates in **database systems** and **SQL**, through labs focused on query writing, data normalization, and relational modeling using industry-aligned case studies.

Business Analyst Intern   ***December 2023 - July 2024***
StandardWings Technologies Pvt. Ltd.   *Nashik, India*
- Documented client requirements by collaborating with **15+ cross-functional** team members and **attending client meetings**.
- Extracted **actionable insights** from **20,000+ rows** of patient data using **MS Excel**, then designed a low-code application in **Mendix**, leading to improved patient onboarding and streamlined appointment scheduling.
- Presented the Mendix app functionality to technical and non-technical stakeholders using clear **MS PowerPoint** decks.

Machine Learning & Data Analyst Intern   ***June 2023 - August 2023***
Cloud4C   *Hyderabad, India*
- Achieved **Natural Language Processing (NLP) accuracy above 90%** by developing a sentiment analysis product using **BERT** through transfer learning and fine-tuning on customer raised tickets.
- Optimized **TensorFlow** training pipelines using **dynamic learning rates**, **mixed-precision training** and **gradient clipping** to improve model efficiency. Identified the **top 5** recurring customer concerns by applying **K-Means clustering** on BERT embeddings.

PROJECTS

Portfolio Allocation Model (GitHub)
- Researched and scraped **5 years of stock data** for 9 companies across 3 sectors using Yahoo Finance, and optimized portfolio allocation through **mean-variance modeling** using **Pyomo, NumPy, and Pandas**.
- Identified Buy & Hold as the optimal investment strategy with **15% ROI** by performing **statistical analysis** of risk-return trade-off assessments using **Monte Carlo simulation** in **Python**.

Strategic Insights for Mitron Bank's New Credit Card Line (GitHub)
- Developed **3 Power BI dashboards** on income, expenditure trends, customer segmentation with **Power Query** and **visuals**.

Energy Consumption Predictor (GitHub)
- Forecasted hourly energy consumption with **92.54% accuracy** using **time-series Linear Regression** in **R** for 5000+ homes.
- Built a **Shiny dashboard** to show how temperature, time and house attributes **influence future energy consumption**.
- Visualized county level energy hotspots using **ggplot2** and **plotly**, highlighting high consumption zones for energy insights.

Covid Data Exploration and Visualization (GitHub)
- Cleaned data using **Excel**, automated updates via **Power Automate** and conducted **exploratory analysis** with **SQL queries**.
- Showcased COVID-19 trends and vaccination impact in **Tableau** using **multiple visualizations** including charts, maps.

Emotion-Driven Chord Generation Using Lyrics (GitHub)
- Generated emotion driven chord progressions using a **fine tuned GPT-2 model** by developing an AI system that classifies song lyrics by **genre with BERT** and **detects emotion using VADER**.
- Engineered an end-to-end pipeline integrating **Hugging Face Transformers**, **Scikit-learn** and **pretty_midi** to convert lyrics into audio ready chord sequences. Achieved **8/10 evaluation score** from **Falcon-7B**.

SKILLS

- **Programming & Libraries:** Python, Java, R, MySQL, Pandas, NumPy, Scikit-Learn, Keras, TensorFlow, PyTorch, Git
- **Data Analysis Tools:** Tableau, PowerBI, Seaborn, Matlab, Excel, Word, PowerPoint, SharePoint, AWS
- **Machine Learning:** Supervised & Unsupervised Learning, NLP, A/B Testing, Predictive Modeling, Statistical Analysis