Venkata Ravi Teja Abburi

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EDUCATION

- **Bachelor of Technology in Computer Science & Data Science Engineering** *Sep 2020 – May 2024*
  Raghu Institute of Technology, Visakhapatnam *CGPA: 8.08/10.0*

- **Intermediate – Maths, Physics & Chemistry** *Jul 2018 – Jun 2020*
  Vision Jr College, Guntur *CGPA: 8.73/10.0*

TECHNICAL SKILLS

- **Programming:** Python, SQL, Java

- **Machine Learning:** Classification Models, Feature Engineering, Model Optimization, Time-Series Cross-Validation

- **ML Frameworks:** Scikit-learn, XGBoost

- **Data Analysis & Visualization:** Pandas, NumPy, Matplotlib, Seaborn, Power BI

- **Model Explainability:** SHAP, Feature Importance Analysis

- **Data Engineering:** REST API Ingestion (Ergast API), Data Cleaning, Transformation, Aggregation

- **Developer Tools:** Jupyter Notebook, VS Code, Git/GitHub, Anaconda

WORK EXPERIENCE

- **DeviSkillHub – AI Intern** *Remote | Nov 2024 – Apr 2025*
  - Built end-to-end machine learning workflows including data preprocessing, exploratory data analysis, and feature engineering for structured datasets.
  - Trained and evaluated classification models using Scikit-learn, improving baseline performance through iterative feature refinement.
  - Implemented data validation and cleaning pipelines to enhance model stability and generalization.

  Tech Stack: Python, Machine Learning, Data Analysis

- **RoboCoupler – AI Intern** *Remote | Jul 2023 – Sep 2023*
  - Analyzed real-world structured datasets and developed machine learning models for prediction and classification use cases.
  - Performed feature selection and model evaluation to improve predictive performance and reduce overfitting.
  - Collaborated with senior engineers to fine-tune models and validate results against business objectives.

  Tech Stack: Python, Machine Learning

PROJECTS

- **Ride Demand–Supply Optimization Hub (Case Study)**
  - Designed and deployed a Streamlit-based analytics dashboard to examine time-based ride demand and supply patterns.
  - Built automated data ingestion and preprocessing pipelines, including timezone normalization, using *pandarallel*.
  - Visualized demand trends by location and vehicle type to identify peak-demand windows and operational bottlenecks.

  Skills: Python, Pandas, Data Analysis, Streamlit

- **Formula 1 Race Analytics & Predictive Engine**
  - Engineered an end-to-end machine learning pipeline using the Ergast API, processing 70+ years of Formula One race data covering 25,000+ driver results.

- Created advanced features including rolling-window driver performance metrics and constructor reliability indices to capture temporal performance trends.
  - Optimized an XGBoost classifier using Bayesian hyperparameter tuning to predict Top-3 podium finishes, outperforming heuristic baselines.
  - Applied time-series cross-validation and SHAP-based interpretability to identify qualifying position and engine manufacturer as key predictors on street circuits.

  Skills: Python, XGBoost, Feature Engineering, Time-Series Modeling, SHAP

- **T20 World Cup Cricket Data Analysis**

  - Analyzed T20 World Cup 2022 datasets to construct an optimized Dream Team based on player performance metrics.
  - Developed Python-based data pipelines to clean, transform, and aggregate match-level statistics.
  - Reduced report generation time by **40%** using optimized Power BI transformations and Power Query workflows.

  Skills: Python, Pandas, Power BI, Data Visualization

CERTIFICATIONS

- Career Essentials in Data Analysis – Microsoft & LinkedIn
- Database Management Systems – NPTEL
- SQL (Advanced) – HackerRank
- CodeKaze Competitive Programming – Coding Ninjas (AIR 665)
- Python (Advanced) – Cutshort

EXTRA-CURRICULAR

- Solved 100+ algorithmic problems on HackerRank.
- NSS Volunteer (Jun 2022 – Apr 2024) – Led and participated in community engagement and social initiatives.