

# Teja Sanagala

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Data Science graduate student with hands-on experience in machine learning, time-series modeling, and data engineering. Skilled in Python, SQL, and statistical methods, with experience building predictive models, data pipelines, and scalable analytics solutions. Experienced in working with cross-functional teams to translate complex data into actionable insights and support data-driven product and operational decisions.

## Experience

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| <b>Data Analyst Intern</b><br>360 DigiTMG | Hyderabad, India<br>03/2023– 06/2023 |
|-------------------------------------------|--------------------------------------|

- Built an end-to-end predictive analytics pipeline for medical inventory optimization using Pandas, NumPy, and Scikit-learn; applied EDA, time-series feature engineering (lag features, rolling statistics), and hyperparameter tuning to improve forecasting accuracy by 14% (MAPE: 18.6% → 16.0%) and reduce inventory wastage by 11%.
- Performed data preprocessing and quality validation, including missing value treatment, duplicate removal, outlier detection and date standardization. rule), and date standardization and wrote SQL queries to extract, join, and transform structured datasets for analysis and reporting
- Developed statistical analyses and visualizations and communicated insights to stakeholders to support inventory planning and operational decisions. decisions.

## Projects

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|--------------------------------------------------------------|-------------------|
| <b>Intelligent Ticket Assignment and Workload Management</b> | 02/2025 - Present |
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- Designed an AI-powered ticket assignment system integrated with Autotask REST API to automate technician allocation.
- Architected a Python decision engine leveraging workload balancing algorithms to generate ranked recommendations.

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|----------------------------------------------------------------|-------------------|
| <b>Wildfire Prediction Using Machine Learning – California</b> | 09/2025 - 11/2025 |
|----------------------------------------------------------------|-------------------|

- Built a Random Forest model (92% accuracy, 0.90 ROC AUC) using CAL FIRE and NOAA data to predict wildfire occurrences.
- Engineered features and applied K-Means clustering with geospatial mapping to highlight high-risk fire zones in California.

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| <b>Sales and Logistics Dashboard using Power BI</b> | 09/2025 - 11/2025 |
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- Built an interactive dashboard in Power BI using Kaggle's 2024 logistics data to visualize sales, profit, and order trends by region and segment.
- Used Pareto analysis, AOV metrics, and delay impact insights to drive pricing strategy and supply chain optimization.

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|------------------------------------------------------|-------------------|
| <b>Real-Time Vehicle Classification and Counting</b> | 09/2024 - 11/2024 |
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- Built a YOLOv11 + ByteTrack detection system with 89.5% accuracy for real-time multi-object tracking in urban traffic.
- Improved tracking precision using Roboflow-annotated datasets and optimized GPU performance for real-time deployment.

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|---------------------------------------------|-------------------|
| <b>Auto Number Plate Recognition System</b> | 01/2024 - 03/2024 |
|---------------------------------------------|-------------------|

- Built and deployed an end-to-end Automatic License Plate Recognition (ALPR) system using YOLOv8 for object detection and EasyOCR for character extraction, achieving 95% character accuracy and 92% overall recognition across 15,000+ images.
- Authored and presented an IEEE research paper on ALPR at UEMCOS international conference.

## Education

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|----------------------------------------------------------|--------------------------------------------|
| <b>University of Delaware</b><br>Masters in Data Science | Newark, Delaware, USA<br>08/2024 - 05/2026 |
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- CGPA: 3.8/4.0

## Technical Skills

**Programming Languages:** Python, SQL, R, Java, C, JavaScript, HTML/CSS

**ML/Data Science:** Scikit-learn, TensorFlow, Keras, NumPy, Pandas, Databricks, PyTorch , Spark, Time-Series Modeling, Forecast Evaluation (RMSE, MAE, MAPE), Back-Testing, Model Validation, Data Modeling, ETL Pipelines, KPI Design.

**Databases & APIs:** MySQL, PostgreSQL, MongoDB, REST APIs

**Visualization & BI:** Matplotlib, Plotly, Seaborn, Tableau, Power BI, , Excel (Advanced formulas, Pivot Tables, Time-Series manipulation, Data cleaning)

**DevOps & Tools:** Docker, Linux, AWS, Azure fundamentals, Git, GitHub.

## Certifications

- Data Engineering on AWS — Foundations (Feb 2026)
- Google Cloud Certified — Cloud Digital Leader
- AWS AI-ML Fundamentals

## Awards

Hackathon Winner — Creativity & Originality Award (2025)

Built an interactive AR communication solution for enhanced digital engagement; won for innovative design and execution.