

# Gururaja Talepalli

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## Summary

Data science and transport planning professional with over 2 years of experience in building machine learning models and LLM-driven applications. Specialized in deep learning for computer vision and NLP, GIS-based analysis, data storytelling, and visualization. Passionate about solving real-world problems through AI-driven innovation.

## Skills

- **Programming & Tools:** Python, Pandas, NumPy, Scikit-learn, Geopandas, OpenCV, Git, SQL
- **Statistical Analysis & Data Mining:** Supervised & Unsupervised Learning; Statistical Modeling; Feature Engineering; Hypothesis Testing; Time-Series Algorithms
- **Machine Learning & Advanced Analytics:** End-to-End Model Development & Deployment; Business Model Analysis; Graph Neural Networks; Random Forests; XGBoost
- **Deep Learning & Generative AI:** PyTorch; PyTorch Geometric; LLMs (GPT, LLaMA, LLaVa); Fine-tuning; Temporal Fusion Transformers; FAISS; CLIP; SigLIP; Ultralytics
- **Big Data & Cloud:** PySpark; BigQuery; Google Cloud Platform (GCP); Vertex AI
- **Visualization & Communication:** Tableau; Matplotlib; Seaborn; ArcGIS; AutoCAD; Data storytelling

## Experience

### Fynd, SDE-1 | AI & ML

Jul 2024–Present

*Project 1 : Robolabs - Shelf Auditor :*

- Developed scalable shelf-auditing system using ArUco marker-based video cropping, image stitching, object detection with YOLO, OCR and CLIP embeddings for accurate product identification. Currently prototyping a Smart Cart solution to track product additions/removals under real-world lighting & movement scenarios.

*Project 2 : Zenith - Product Recommendations systems*

- Fine-tuned LLM-based NER for Apache Solr to enhance search relevancy, query auto-correction, and completion. Deployed Temporal Fusion Transformer models on Vertex AI for trending products recommendation, built scalable personalized product recommendation pipelines with Light GCN model replacing legacy Two-tower architecture. Implemented a custom-trained SigLIP model replacing CLIP embeddings for visual similarity recommendations and 'Shop-the-Look' searches on Zenith platform.

### Knight Frank, Senior Associate

Sep 2022– Apr 2023

*Technical Due-diligence Projects:*

- Conducted travel-demand modeling, forecasting, and revenue estimation using PTV Visum, spreadsheet modeling, and statistical analyses for strategic decisions on Pune Regional Ring Road , Nashik NH-60, Jalna MMLP projects. SARIMA based tourism demand modeling for feasibility assessment of ropeway projects. Prepared techno-economic viability reports evaluating OEM and concession agreements for electric bus gross-cost contracts funded by SBI, ADB, and Standard Chartered in Bengaluru, Delhi, and Nagpur.

### AMS India, Project Executive

Dec 2019–Mar 2020

*City socio-economic & sanitation survey and dashboard creation:*

- Conducted large-scale household data collection, created geo-database, and developed interactive dashboards using ArcGIS Online and Tableau, enabling data-driven socio-economic and sanitation insights.

## Internships

### Genesys International:

Dec 2023–Jan 2024

- Developed commercial-building board detection models, performed OCR-based address parsing for geocoding. Built 3D-imaging models to quantify tree dimensions for carbon sequestration analysis of Urban Digital Twin project.

### Telangana Remote Sensing Centre:

Jan 2018–Feb 2018

- Developed geospatial databases by performing cadastral map stitching, georeferencing, and digitization using OpenCV and ArcGIS to identify and manage government land encroachments.

## Education

### PGP in Artificial Intelligence and Data Science

Jun 2023 – Jun 2024

Jio Institute

CGPA: 7.75

### Master of Planning (Transportation & Infrastructure)

Aug 2020 – Apr 2022

School of Planning and Architecture, Vijayawada

CGPA: 8.63

### B.Tech in Urban and Regional Planning

Aug 2014 – Apr 2018

Jawaharlal Nehru Architecture and Fine Arts University

Percentage: 71%