

Surya Teja Menta

Data Scientist / ML Engineer / AI Engineer

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Summary

I'm Surya Teja Menta, Results-driven Senior Data Scientist with 4+ years of experience in **Data Science**, **Machine Learning (ML)**, and **Generative AI (GenAI)**. Proven expertise in **RAG (Retrieval-Augmented Generation)**, **LLM fine-tuning**, **MLOps**, and end-to-end AI solutions. Strong background in data analytics, statistical modeling, AI-powered automation, and scalable AI architectures. **IBM Certified Professional Data Scientist** with hands-on experience in **LangChain**, **Hugging Face**, **OpenAI APIs**, **Vector Databases** (ChromaDB, Pinecone), and cloud deployments (AWS, GCP). Passionate about AI research, model optimization, and developing cutting-edge AI solutions.

Work Experience

- Senior Data Scientist - Robert Bosch (Jan 2024 - present)

Designed and deployed **custom YOLOv8 models** for computer vision applications in sensor-based fault detection. Built **multi-modal RAG pipelines** for intelligent **document processing**, **contextual retrieval**, and **GenAI-powered insights**. Worked on **Time series data** for **Adnoc Project**. Developed ML algorithms for signal processing and sensor vibration data analytics using scikit-learn, PyTorch, and TensorFlow. Worked on **LLM fine-tuning**, **prompt engineering**, and efficient model inference for enterprise AI applications. Integrated MLOps best practices for scalable AI pipelines, model versioning, and automated deployment.

- Subject Matter Expert (Data Analyst) - Tudip Technologies (Oct 2020 - Oct 2023)

Developed **interactive analytics dashboards** and data reports in Google Data Studio for content management analytics. **Automated text summarization & paraphrasing using NLP Transformers (BART, T5)** and deployed on **Google Cloud Run**. Built AI-powered data visualization tools to enhance real-time business intelligence and trend analysis. Integrated **LLM-powered chatbots** with Google Sheets API to improve data accessibility across teams. Recognized with the **Best Team Award** for highest client appreciation and impactful AI-driven automation.

Projects

- Advanced RAG Research Assistant (LangChain, LLM, Hugging Face, Vector DB, AI, NLP)

Built an AI-powered **Retrieval-Augmented Generation (RAG) system** for intelligent document analysis with multi-modal PDF processing, semantic chunking, and **adaptive query handling**. Integrated vector-based **semantic search (ChromaDB)**, **BM25 retrieval**, and contextual response generation using **Llama3.2** and Hugging Face. Developed context-tracking algorithms for personalized, stateful interactions. Tech stack: **Python, LangChain, Chainlit, OpenAI API**.

- Github Automated Analysis (OpenAI, Langchain, LLM)

Automated Complexity Analysis: Engineered a Python tool using GPT and LangChain to pinpoint intricate GitHub repositories. **Memory Optimization:** Implemented efficient memory management for processing extensive files while adhering to token limits. **Enhanced Complexity Scoring:** Utilized prompt engineering to elevate accuracy in evaluating repository complexity, refining the precision of the tool.

- Re-Enhance.AI (Opencv, ESRGAN, Pytorch)

The Re-Enhance.AI project is a set of tools and algorithms that can be used to improve the quality of your Image for Space & **Research Purposes**. Even though the model accepts only images with (256x256x3) dimensions, this framework manages the higher dimensions by **Split and Send Policy**.

Professional skills

Knowledge: Data Science, Machine Learning, Deep, NLP & CV, LLMs, Fine Tuning LLMs, Gen AI, OpenCV, YOLOv8, Image Processing, Object Detection, GANs, Signal Processing & Time Series Analysis

Languages: Python, SQL, HTML, CSS, Web development, SQL, NoSQL

Frameworks: Tensorflow, Pytorch, Keras, Langchain

Cloud: GCP Cloud Run, Amazon Sage Maker(AWS) basic

Libraries: Numpy, Pandas, Sklearn, Spacy, NLTK, Opencv, Matplotlib / Seaborn, scipy

Tools: Jupyter notebooks, docker, GitHub, Git, Google DataStudio

Others: Statistics & Probability, Calculus, Mathematics, Linear Algebra, Worked on Complex Datasets, Statistical Analysis, Data Mining, Model Building and Deploying, Hypothesis Testing, Data Analytics.

Education

Bachelor's Degree(CS) - PBR VITS, Kavali, AP (June 2016 - May 2020)

I have done my Bachelor's degree in Computer Science with **78.3%**. I have participated in paper presentations and won prizes too.

HSC - Narayana Junior College, Kavali, AP (June 2014 - May 2016)

I have completed my HSC education with a 92.5%

SSC - Kranthi EM School, Kavali, AP (June 2004 - May 2014)

I have done my schooling with 87%. I also participated in school dramas, sports, etc.

Certificates & Courses

- IBM Professional Data Scientist Certificate
- Advanced Deep Learning course in Ineuron.AI
- Python & Web Development

Soft Skills

Analytical Thinking: Demonstrated through experience in data analysis, statistical techniques, and training on complex datasets.

Problem Solving: Interpret data, Implementing algorithms, and finding solutions. used problem-solving skills to solve challenges.

Collaboration: Highlighted by working with Google on the Google LX Project, collaborating with clients, and creating analytics dashboards and reports to meet their requirements.

Communication: Evident through writing AI/ML blogs, presenting papers, and effectively communicating complex concepts to both technical and non-technical stakeholders.

Continuous Learning: Exhibited by pursuing advanced courses and certifications in data science, machine learning, and deep learning.

Adaptability: learning new technologies, and actively contributing to AI/ML communities. I'm tech savvy.

Time Management: Proven ability to handle multiple projects simultaneously while meeting deadlines