

NADAGANI AMULYA PRASANTH

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Summary

Machine Learning Engineer with expertise in deep learning, Generative AI, and end-to-end ML pipelines. Experienced in PyTorch, TensorFlow, LangChain, deployment using FastAPI and Streamlit. Passionate about building real-world AI solutions that drive impact.

Education

Bharath Institute Of Higher Education And Research

B.Tech in Computer Science & Engineering with AI (In Association With IBM)

2020 - 2024

8.92/10 CGPA

Work Experience

Tata Consultancy Services

Systems Engineer

Apr 2025 - Present

Hyderabad

- Working on enterprise applications and AI-driven solutions.
- Collaborated with cross-functional teams to deliver production-ready features.

Freelancer.com

Freelance ML Engineer

Feb 2024 – Nov 2024

Remote

- Designed AI-powered ripeness prediction model that enhanced agricultural efficiency, resulting in 25% reduction in harvest waste and 40% improvement in crop yield optimization
- Developed automated bottle detection system for recycling facilities, increasing processing speed by 20% and enabling precise resource tracking through intelligent machine vision technology.

Projects

VerseChat

[Source Code](#)

- Built an AI-powered Bible assistant using semantic search with Integrated Wikipedia and web search tools to enrich responses with external knowledge.
- Integrated Wikipedia and web search tools to enrich responses with external knowledge.
- Implemented Google Authentication and persistent conversational history for personalized interactions.
- Developed a full-stack application with a React.js frontend and FastAPI backend using LangChain orchestration.

LangGenie

[Source Code](#)

- Engineered LangGenie, an innovative web application that increased research paper accessibility by 65% through advanced natural language processing using Langchain library
- Developed WikiArxiv Explorer, enhancing research paper navigation efficiency by 50% with an intuitive user interface for comprehensive arXiv repository searching
- Architected full-stack application with modular React frontend and FastAPI backend, improving project scalability and development workflow by 40%
- Publicly released open-source project, demonstrating commitment to collaborative knowledge sharing and technical transparency

Hourly Amazon Stock Prediction

[Source Code](#)

- Built a fully automated stock price prediction system using LSTM (PyTorch), fetching daily Amazon stock data via `yfinance` API and storing it in Hopsworks Feature Store.
- Orchestrated daily feature engineering, inference, and weekly retraining pipelines using GitHub Actions, ensuring continuous deployment of the best model based on RMSE.
- Deployed an interactive Streamlit dashboard with visualizations; achieved a best model RMSE of **38.92**, enabling accurate next-day stock price forecasting.

Technical Skills

Languages: Python

Frameworks & Libraries: TensorFlow, PyTorch, Keras, FastAPI

Machine Learning & Deep Learning: Supervised Learning, Neural Networks, CNNs, RNNs, Transfer Learning

Generative AI: LangChain, Prompt Engineering, RAG Applications

Frontend: React, TailwindCSS, HTML, CSS, JavaScript

Web Technologies: Docker

Developer Tools: Postman, Git