

Ishitha Padmaraju

Machine Learning Engineer

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Profile

Machine Learning & MLOps Engineer with 2+ years of experience specialized in deep learning models and operationalizing AI pipelines. Delivered scalable, production-grade ML systems using Docker, ONNX, and CI/CD workflows, while integrating monitoring and versioning practices.

Eager to bring my experience in model deployment and automation and contribute to the mission of translating advanced AI models into real-world solutions.

Primary stack: Python, PyTorch, TensorRT, Docker, GitLab CI/CD, FastAPI, MLflow

Experience

- 05/2024 – 01/2025 **Machine Learning Researcher**
Schaeffler Hub for Advanced Research at KIT *Karlsruhe, Germany*
Master Thesis: Spatial-temporal Synchronization of Distributed Sensor Data for Deep Learning-based Road Condition Prediction
- Led end-to-end development of a sensor fusion framework using ROS 2 synchronizing sensor data for real-time prediction achieving 91% accuracy.
 - Optimized deep learning models via transfer learning and deployed them on embedded hardware, achieving <10 ms inference latency.
 - Containerized best performing model with Docker image in Harbor registry for scalable inference on embedded application.
- Skills:** Python, C/C++, CMake, PyTorch, Docker, Linux, Shell, Bash, Git
- 02/2024 – 04/2024 **Machine Learning Intern**
Schaeffler Hub for Advanced Research at KIT *Karlsruhe, Germany*
Project Thesis: Enhancing Inference Efficiency of Deep Learning Models
- Accelerated real-time inference for perception tasks to 187 FPS with GPU optimization, cutting latency by 99.98%.
 - Reduced memory consumption by 50% through precision tuning, layer-wise profiling, and targeted quantization of deep learning models.
- Skills:** Python, CMake, OpenCV, CUDA, ONNX, TensorRT, GitLab CI/CD
- 08/2023 – 01/2024 **R&D E-mobility Systems Intern**
Schaeffler Technologies AG & Co. KG *Herzogenaurach, Germany*
- Developed an AI model as a proof of concept for anomaly detection on test benches which increased efficiency by 24% for drive systems.
 - Slashed manual reporting time by 80% with test report automation pipeline.
- Skills:** Python, Pandas, Tensorflow, GitLab CI/CD, Time Series Analysis

10/2021 – 09/2022 **Machine Learning Engineer**
Stellantis *Hyderabad, India*

- Implemented a CAN based fault detection system for 500+ vehicles with 95% prediction accuracy.
- Built CI/CD pipelines for scalable cloud deployment in Agile workflows.

Skills: Python, Docker, AWS, VS Code, Cloud Deployment, Stakeholder Communication

Education

10/2022 – 02/2025 **Master in E-Mobility – Artificial Intelligence and Autonomous Driving**
Friedrich-Alexander University Erlangen-Nuremberg *Germany*
Key Courses: Data Science, Machine Learning, Deep Learning **GPA:** 1.6

07/2017 – 07/2021 **Bachelor in Mechanical Engineering**
Jawaharlal Nehru Technological University Anantapur *India*
Key Courses: Robotics & Automation, Operations Research **GPA:** 1.7
Top 5 % in the batch

Projects

2024 **Lead Scoring & Customer Insights Engine**

- Developed a RAG pipeline using an LLM (GPT-3.5-turbo) and vector search (FAISS) to analyze 1000+ documents for lead scoring and insights.

Skills: Python, RAG, vector DBs, LangChain, Streamlit, AWS Lambda

2024 **AI Design Generator (Wunderhub)**

- Spearheaded a PoC, trained a ViT model using PyTorch & Hugging Face, with 85% semantic alignment in graphics generated from text prompts.

Skills: PoC development, PyTorch, Hugging Face, Flask APIs, NLP

2023 **Dolimo – Dolphin Health Monitoring App (Tiergarten)**

- Built a multi-category dashboard (7 domains: health, nutrition, etc.) using Ionic Vue, with 30+ dynamic features for real-time animal monitoring.

Skills: Ionic Vue, FastAPI, Data Analysis, Agile Workflows

Languages

English (C2), German (B2), Telugu (native), Hindi (B2)

Hobbies

Creativity	Digital art creation with AI tools (DALL-E, MidJourney)
Learning	Participation in Tech Meetups and Workshops to learn new technologies
Lifestyle	Culinary Experiments and Yoga/Meditation for mental balance

Date: 29.05.2025

Signature: 