JIYA JAHNAVI

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• Portfolio • LinkedIn • Github • Hugging Face

SUMMARY

Computer Science student with experience in Generative AI, Deep Learning, and Large Language Models, including NLP, Computer Vision and multimodal applications.

PROJECT

NanoJEPA ***(Python, PyTorch, Gradio UI, Deep Learning, Neural Networks, Tokenization , Machine Learning)*** *(Link)* **Mar 2026**

- Built **NanoJEPA**, a lightweight framework implementing **genetic-Pareto** evolutionary algorithms for automated LLM prompt optimization.
- Developed an **LLM-driven optimization pipeline** using mutation, reflection, and multi-objective evaluation to evolve better prompts.
- Implemented **Pareto-based selection and evolutionary search** to improve prompt quality with minimal evaluation calls.
- Designed a modular **AI experimentation pipeline** for optimizing prompts in **LLM agents and reasoning workflows.**

Satellite Image Classification ***(Python , PyTorch, OpenCV, NumPy, Pandas, Matplotlib, Seaborn)*** *(Link)* **Feb 2026**

- Developed a **deep learning**-based system to classify **satellite images** into horizon, flare, and quality categories, with dedicated detectors for each task.
- Built a unified pipeline integrating **horizon detection**, **flare detection**, and **image quality** assessment with automated processing and visualization.
- Implemented data preprocessing, augmentation, model training, and evaluation, along with an image compression module (≤100KB) for efficient transmission.

Antibiotic Resistance Prediction ***(Python, Pandas, NumPy, Scikit-learn,Matplotlib, Seaborn,Streamlit)*** *(Link)* **Jan 2026**

- Designed and deployed an **end-to-end ML** solution for **antibiotic resistance prediction** using co-resistance features and environmental data
- Achieved optimal performance with **Random Forest** (CV F1: 0.735), outperforming boosting models through rigorous evaluation
- Applied EDA, feature engineering, SMOTE-based imbalance handling, and SHAP explainability, with **deployment via Streamlit** for real-time predictions

EDUCATION

Bachelor of Technology in Computer Science & Engineering **Aug 2023 - Present**
Amity University Uttar Pradesh

SKILLS

- **AI/ML:** Machine Learning (ML), Deep Learning (DL), Generative AI, Natural Language Processing (NLP), Computer Vision (CV), Retrieval-Augmented Generation (RAG), Large Language Models (LLMs)
- **Libraries & Frameworks:** PyTorch, Scikit-learn, OpenCV, Pandas, NumPy, Matplotlib, Seaborn, FastAPI
- **Programming Language:** Python , JAVA
- **Tools & Platforms:** Git, Docker, Jupyter Notebook, Google Colab

CERTIFICATES

- **Udemy -** Complete Machine Learning With Real-World Deployment*(Link)*
- **Deloitte (Forage)** Job Simulation – Technology *(Link)*
- **Udemy –** Python for Machine Learning (Python, NumPy, Pandas) *(Link)*

HACKATHONS:

- **Meta PyTorch OpenEnv Hackathon –** Meta at Scalar School of Technology
- **CodeCure AI Hackathon 2026 –** IIT BHU
- **Smart India Hackathon 2025 –** 1st Runner-Up (Internal Round)