

Abhay Agarwal

✉ officialabhay030405@gmail.com ☎ +91 8887752006 📁 Portfolio in Abhay Agarwal

🔗 Abhay030405 📊 Kaggle ⚡ CodeForces ⚡ Leetcode

Education

Motilal Nehru National Institute of Technology Allahabad

Bachelor of Technology, Electrical Engineering

2024 - 2028

CPI: 7.82 till Semester 2

Mahatma Hansraj Modern School, Jhansi UttarPradesh

Higher Secondary Education, CBSE

2021 - 2023

Percentage: 82.33%

Rani Laxmibai Public School, Jhansi UttarPradesh

Secondary Education, ICSE

2021

Percentage: 93.2%

Personal Projects

Command Nest — Ultimate AI Command Hub For Intelligence Operations



- AI-powered platform managing missions, documents, security, analytics, and operations.
- Centralized intelligence system with role-based access and real-time automation.
- Build with Python, FastAPI, LangChain, Geminni, Ollama3.2:3b .

GeoShield — Pixel-Level Landslide Intelligence Using Mask R-CNN



- Trained Mask R-CNN for pixel-level landslide segmentation on limited annotated images
- Implemented transfer learning using COCO pretrained ResNet-101 backbone architecture
- Built with Python, PyTorch, Detectron2, Mask R-CNN, ResNet-101, FastAPI

Neural Watch — Autonomous ML Data Integrity & Drift Detection Platform



- Developed an intelligent system to monitor data drift and data quality in ML pipelines
- Implemented statistical and ML-based drift detection using KS Test, PSI, and Isolation Forest
- Built with Python, FastAPI, LangChain, LangGraph, Geminni, Ollama3.2:3b

FairLensAI: Model Explainability & Bias Detection System



- Built ML interpretability system visualizing predictions and feature influence using SHAP, LIME.
- Used LangChain to generate human-readable explanations summarizing model logic and bias insights
- Built with Python, FastAPI, LangChain, Geminni

Technical Skills

Programming Languages: Java, Python

Mathematical & Statistical Tools : NumPy, Pandas, Seaborn, Matplotlib

Libraries & Frameworks : sk-learn, XGBoost, TensorFlow, PyTorch, LangGraph, LangChain, Streamlit, FastAPI

DevOps & Development Tools: Git, GitHub, VS Code, Jupyter Notebook, Google Colab

Specialized Area : Object-Oriented Programming, Data Structures and Algorithms

Achievements

- **Competitive Programming :** Ranked as "Pupil" on Codeforces with a peak rating of 1213.
- **First Runner-up :** HACKATRON, technical fest (Infotsav) held at IIITM Gwalior.
- **Special Mention :** Dev or Die (Power Surge 2025), development event under Avishkar'2025
- **Winner :** Logical Rhythms (Codesangam 2025), Machine Learning event by CC club MNNIT.
- **Winner :** Robo-Wars (BotRush Robotics Club 2025), 1 to 1 Robot fight by Robotics Club MNNIT.
- **First Runner-up :** Predefined Hardware (Power Surge 2025), hardware event under Avishkar'2025
- **Second Runner-up :** Doodle Bot (Robomania 2024), perfect bot event under Avishkar'2024

Positions of Responsibility

- **SMP Mentor** — Student Mentorship Program, MNNIT Allahabad
Mentored junior students academically and professionally through structured guidance and peer support.
- **Team Leader** — Cloud Weaver (🌐)
Led team to First runner-up at Infotsav, IIITM Gwalior by designing and developing a scalable cloud-based solution.