Piyush Gupta

Machine Learning Engineer

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Professional Summary

Machine Learning addict, developer, and researcher driven by a relentless curiosity for intelligent systems and creative problem solving. I obsess over building, training, and deploying AI tools for real-world and socially impactful solutions. My workflow thrives on rapid prototyping, exploration of the latest ML papers, and hands-on development—especially in image/video processing, agentic AI, and applied deep learning research.

Technical Skills

- **Programming:** Python, PyTorch, TensorFlow, OpenCV, Scikit-learn, NumPy, Pandas, Flask, FastAPI, Docker, Linux, Bash
- **ML/AI:** Deep Learning, CV, Transfer Learning, CNNs, Vision Transformers, GANs, Image Segmentation, Agentic AI, Diffusion Models
- **Tools:** GitHub, DVC, HuggingFace, Colab, Jupyter, VSCode, REST APIs

Experience

- **Satelite Image Processing Research Intern** at **AnyTechPros** Jul 2025 – Present Researching and developing image segmentation pipelines for multi-temporal satellite imagery using advanced deep learning.
  - Implemented novel preprocessing and segmentation methods for satellite data streams.
  - Key learning: In-depth exposure to remote sensing, multi-temporal image analysis, and practical deployment at scale.

- **ML Research Intern@MANIT BHOPAL** (Jun 2025)
  Worked on ongoing research for GlaucFusion: deep learning for glaucoma detection in eye images.
  - Developed, trained, and evaluated vision transformer models for ophthalmology datasets.
  - Key learning: Research methodology in medical imaging, state-of-the-art DL in healthcare.

- **SDE Intern (Backend)** at **Bluestock Fintech** (May 2025 – Jun 2025) Part of backend engineering team; primary developer for Bluestock IPO web application.
  - Designed, implemented, and deployed APIs for real-time financial data and user management.
  - Key learning: Scalable backend deployment and team collaboration in fintech.

- **Samsung Prism Research Intern@IIITDM KURNOOL** (Dec 2024 – Mar 2025) Learned and implemented ML/AI foundations; led the Terahertz Breast Cancer Image Segmentation project using a custom U-Net.
  - Developed real-time model for segmentation of terahertz medical imagery.
  - Key learning: Applied ML fundamentals to solve challenging, real-world medical problems.

Selected Open Source Projects

- **Agentic AI Agent for Blogging Engagement** https://github.com/Pg1910/SCRIBE-Smart-Content-Reporting-Intelligence-for-Blogging-Engagement
  Built agentic pipeline for automating report generation and analysis.

- **Breast Cancer Image Segmentation (Terahertz Imaging)** https://github.com/Pg1910/breast_cancer_image_segmentation_of_terahertz_images_using_customUNET
  Custom UNet for medical image segmentation; advanced multi-modal data.

- **Optimized Fertilizer Recommendation (AI/ML)** https://github.com/Pg1910/Optimized-Fertilizer-Recommendation-using-Indian-Soil-Dataset-AI-ML-
  End-to-end ML pipeline for soil analysis and recommendation.

- **GlaucFusion: Vision Transformer for Glaucoma Diagnosis** https://github.com/Pg1910/glaucoma-detection-ai
  SOTA pipeline using vision transformers for disease diagnosis.

- **Bluestock IPO WebApp** https://github.com/Pg1910/bluestock-ipo-webapp
  AI-powered backend for financial insights (Fintech project).

Education

B.Tech. Mechanical Engineering

Indian Institute of Information Technology, Design and Manufacturing (IIITDM) Kurnool
2022 – 2026 (Current 3rd Year)

Achievements

- Placement Cell Coordinator, Mechanical Engg. 2025–2026
- Technical Head, Mechanical Engineering Association 2025–2026
- NSS - Social Impact Projects
- Hackathons: Flipr Hackathon, Google Developer Groups Solution Challenge (Campus), etc.

Certificate Drive Link:https://acesse.one/Ewn8I