

# GAURAV PATIL

Thane, Maharashtra, India

+91-9892130048 | [gauravpatil2516@gmail.com](mailto:gauravpatil2516@gmail.com) | [LinkedIn](#) | [GitHub](#) | [Portfolio](#)

## Education

### SIES Graduate School of Technology

B.E. Artificial Intelligence & Machine Learning - CGPA: 8.57/10

Aug 2023 – Jun 2027

Mumbai, India

## Experience

### Pioneer Machines & Automation Pvt. Ltd — AI Intern

Jun 2025 – Aug 2025

- Used Vertex AI and PubMed datasets for medical document analysis including data scraping, chunking, image matching, and ML pipeline setup.
- Built retrieval workflows and structured processing systems improving throughput and consistency for clinical data tasks.

## Projects

### Neuro-RAG — Mental Health Diagnostic AI | Python, FAISS, Flask, LangChain | [GitHub](#)

2025

- Deployed RAG system over ICD-10 chapters for grounded, hallucination-resistant answers with inline citations.
- Vectorized 14,000+ lines into 1,438 chunks; tuned top-k retrieval achieving ~29 ms CPU latency with FAISS.
- Flask UI enables natural language search, evidence panels, and copyable references for clinical use.

### Retinal Vessel Segmentation | PyTorch, U-Net++, FastAPI, CV | [GitHub](#)

2024–25

- Implemented U-Net++ with nested skip connections achieving 83.7% Dice score and 96% pixel-wise accuracy on DRIVE.
- Built FastAPI web dashboard with real-time inference (~1 second), multiple visualization modes, and drag-and-drop upload.
- Deployed production pipeline with mixed precision training, learning rate scheduling, and early stopping.

### DermAI — Skin Disease Classifier | ViT, TensorFlow, Llama 3.3, Flask | [GitHub](#)

2024–25

- Trained Vision Transformer achieving 99.1% accuracy and Cohen's Kappa 0.975; surfaced Grad-CAM heatmaps.
- Integrated Llama 3.3 for medical Q&A; deployed Flask+SQLite with queued uploads and consult summaries.

## Technical Skills

**Programming:** Python, C, SQL

**ML/DL:** PyTorch, TensorFlow, Scikit-learn, XGBoost, SHAP, LangChain, Hugging Face

**Data:** Pandas, NumPy, Streamlit, Power BI

**CV/NLP:** U-Net++, Detectron2, OpenCV, Grad-CAM, MiDaS DPT, Mask R-CNN, ViT, SentenceTransformers, Groq SDK

**Deployment:** Flask, FastAPI, SQLite, Docker, GitHub

**Tools:** Jupyter, VS Code, Google Colab, Git

## Leadership & Activities

### IEEE — Technical Head

2024 – Present

- Delivered workshop on Indian Sign Language recognition with CNN for 50+ attendees; authored lab materials and demos.
- Led AI/ML workshops at Technopedia 2024 managing logistics, content sequencing, and live troubleshooting.

### Google Developers Group — ML & DS Coordinator

2024 – 25

- Mentored 100+ students on model design, evaluation, and deployment; ran peer-led hack/practice sessions.

## Achievements

**Second Runner-Up** — OxygenIgnite Hackathon, NIT Goa (Stellar India)

**Winner** — Cognition (Department-Level Project Competition)

**Runner-up** — BNB Chain Bombay Hackathon

**Top 3 (Sustainability)** — ByteCamp Hackathon

**Semi-finalist** — Deep Blue Project Season 10 (Mastek)

## Certifications

**Supervised Machine Learning** — DeepLearning.AI & Stanford

**Advanced Learning Algorithms** — DeepLearning.AI & Stanford

**Data Analytics Essentials** — Cisco