Yashmit Katekar

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SUMMARY

Final-year Diploma student in AI & ML looking for a 6th-semester internship in machine learning, computer vision or Python development. I've trained and evaluated computer vision models (CNN classification, YOLO detection), built full-stack apps with Flask, React and Firebase, and led a 7-member team through a full deep learning project.

PROJECTS

Waste Classification using CNN *Team Lead* *MobileNetV2 · OpenCV · Streamlit*

- Led a 7-member team across 8 tasks; personally handled the dataset, preprocessing, CNN research, and model building and improvement.
- Fine-tuned MobileNetV2 on RealWaste (4,752 images, 9 classes) to 92.99% test accuracy and 0.9359 macro-F1.
- Built a Streamlit app with live webcam classification through OpenCV; presented and defended it live.

Road Damage Detection with YOLO11 *Solo project* *YOLO11 · ByteTrack · Colab*

- Trained YOLO11 on the RDD2022 India set (4 damage classes, 5,368 training images) to 0.453 pothole AP50 on the held-out test split.
- Measured the domain gap: 0.020 pothole AP50 on UK phone photos, 0.218 after fine-tuning on India plus UK data.
- Built a dashcam video pipeline with tracking, a road-area filter, duplicate-ID merging, a severity score and a GPS map; limits are documented in the public repo.

PitGuard: Underground Miner Safety Dashboard *Flask · MySQL · Isolation Forest*

- Real-time dashboard that tracks gas, air quality, temperature and humidity (simulated sensors) and raises alerts.
- Designed the MySQL schema, wrote the rule-based risk logic, and added Isolation Forest for anomaly detection.
- Deployed on Render with Aiven-managed MySQL.

AnnaDaan: Food Donation App *Final Year Project* *React · Capacitor · Firebase*

- Web and mobile app that connects food donors with recipients through a four-phase claim flow; built with one teammate.
- Own the Firebase auth, Firestore data layer, claims logic, a rule-based food-safety layer and the urgency scoring.
- Built a donation-volume forecasting module (Random Forest, XGBoost, LSTM) that beats naive baselines by about 30% MAE on simulated data; a CNN freshness classifier is next.

Codinagent: Personal Task-Automation Agent *Python · Flask · React · Telegram*

- Built an agent that reads and edits files, runs allowlisted shell commands, searches the web and hands work to sub-agents.
- Rotates across Groq, Gemini and OpenRouter models with automatic failover when one rate-limits or fails.
- Added safe, assisted and autonomous permission modes, a SQLite task queue, schedules and a Telegram bot to control it from my phone.

Smart India Hackathon 2026: SkillBridge *SIH26044* *FastAPI · sentence-transformers*

- One of 6 on the team; submitted for the Academia-Industry Collaboration Portal problem statement.
- Building the AI skill-matching engine, a Placement Readiness Score and a Career Path Simulator.

ML Portfolio *CNNs · DistilBERT · Streamlit*

- MNIST and Fashion-MNIST CNNs plus a DistilBERT sentiment classifier, each deployed on Streamlit with a public GitHub repo.

SKILLS

Languages	Python, SQL
ML / DL	PyTorch, TensorFlow, HuggingFace, scikit-learn, OpenCV, YOLO11, CNNs, transfer learning, model evaluation
Backend & data	Flask, FastAPI, MySQL, Firebase, Flask-SQLAlchemy
Frontend & tools	React, Flutter, HTML/CSS/JS, Tailwind, Streamlit, Git/GitHub, Render, Colab

EDUCATION

Diploma in Artificial Intelligence & Machine Learning *Expected Apr/May 2027*
Government Polytechnic, Mumbai