# SIDDHANT PATIL

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GitHub

Portfolio

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LeetCode

# **EXPERIENCE**

## IndoAI Technologies Private Limited Machine Learning & AI Intern | Onsite Work

June 2024 - Present Pune,India

- Designed autonomous ML systems to automate predictive models, with integrated Power BI dashboards for actionable insights.
- Built a YOLOv8 fire & smoke detector (92.6% mAP) trained on 6,391 images across 200 epochs for real-time hazard monitoring.
- Leveraged DeepStack to train a custom vehicle & person detector on 10,000+ images (98% accuracy), deploying to edge devices (Raspberry Pi, Jetson Nano) via ARM64, OpenCV, and TensorFlow Lite.
- Developed facial-detection for attendance tracking, processing 87 unique faces in real time.

#### CoDE Club PESMcoe

Oct 2023 - Oct 2024

Pune,India

## Co Technical Head | Full-Time

- Utilized popular Python libraries such as NumPy, Pandas, OpenCV, TensorFlow, and Scikit-learn to drive hands-on sessions, motivating 60+ students to explore AI, ML, and data science.
- Overseeing and managing club activities related to technology and development, leading to a 120% growth in technical support engagement during my tenure.
- Coordinating team efforts to ensure smooth execution of tech projects.

## Rotary (Rotaract Club Of Pune Metro) | Full-Time

Aug 2023 - Nov 2024 Pune,India

- Engaged in social service through Rotary, supporting community development and meaningful causes.
- Led donation drives, distributing 1,000+ sanitary pad packets to girls in government schools.

## **SKILLS**

## **EDUCATION**

- Programming Languages: C, C++, Python, SQL
- Machine Learning: Pandas, NumPy, Scikit-learn, Matplotlib, Seaborn, XGBoost
- Deep Learning & Computer Vision: YOLO (v8), OpenCV, TensorFlow, PyTorch, Roboflow, Data Tools: Power BI, Excel, AI
- Leadership: Event organizer, hackathon judge, team coordination & presentation.

• Savitribai Phule Pune University:

Bachelor of Engineering In Artificial Intelligence & Data Science | 2022-2026

#### **PROJECTS**

#### Care Vault: Women & Child Safety AI

Github Demo

- Hand gesture emergency alert system using OpenCV achieves 93% accuracy on a 5-class, 1440-sample dataset (precision: 83–100%, recall: 86–98%, F1-score: 90–97%) for accessible digital interface control.
- Missing person identification with real-time facial recognition system using Python, OpenCV, and face\_recognition; processes every 2nd frame, applies 0.6 threshold, draws boxes, encodes to JPEG, sends multi-threaded email alerts.
- **Violence detection** using real-time YOLOv11s-pose and XGBoost, processing every 3rd frame with >0.55 confidence to trigger instant emergency alerts for high-risk incidents.
- Incident severity prediction using TF-IDF and ML, trained on 10K+ Indian crime reports to prioritize emergency responses.

#### Smart Harvest AI:

Github Demo

- Plant Disease Detection: Uses CNNs to detect plant diseases from leaf images. The dataset includes ~87,000 images of healthy and diseased leaves across 38 classes.
- Crop Recommendation: Applies Random Forest to analyze soil NPK values, weather, and crop types to suggest suitable crops. AgriSense uses SVM for crop prediction with 90.01% accuracy.
- Fertilizer Prediction: Uses SVM to recommend fertilizers based on soil health and crop requirements. AgriSense demonstrates this with soil and crop data.
- Farm Loan Prediction: Uses Gradient Boosting to assess loan eligibility based on land location, yield estimates, and market trends.

#### **ACHIEVEMENTS**

- Magnitude 1.0 National Hackathon Winner (Team Leader)
- Smart India Hackathon National Level Finalist Top 6 amongst 500+ teams.
- BOROSA BOSCH Road Safety Hackathon 2025 Finalist Top 18 amongst 320+ teams
- Judge & Core Organizer for IndoVate Sprint 2025 Hackathon at MKSSS Cummins College of Engineering for Women
- Black Rock Hackathon Finalist Top 9 amongst 55 other teams.
- 2x ProStart PreSIH Winner Software Category & overall 7x Hackathons Finalist