BHARATLAL KAILASHNATH PATEL



AI / ML Intern Aspirant • Python • Computer Vision • Full-Stack Prototypes

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PROFILE

Third-year B.E. student in Electronics & Computer Engineering at TSEC with hands-on experience in computer vision (OpenCV), Python backends and REST APIs. Two-time hackathon winner who learns by building and ships working prototypes for real-world problems. Seeking an AI internship to apply Python and AI skills to enterprise automation and intelligent systems.

EDUCATION

B.E., Electronics & Computer Engineering — **Expected 2028**
Thakur Shyamnarayan Engineering College (TSEC), Mumbai — **CGPA: 7.0**

TECHNICAL SKILLS

AI / ML: Python, OpenCV, Face Detection & Recognition, NumPy, Pandas, REST APIs, LLMs (basic hands-on, learning)
Languages: Python, C++, JavaScript (learning)
Backend: REST APIs, Firebase
Frontend: HTML, CSS, React (basic), Tailwind CSS
Tools: Git, GitHub, VS Code
Hardware / IoT: Arduino, ESP32, sensors (LM35)

PROJECTS

CIPHER – LLM Security Firewall | Python • scikit-learn • Gemini API — View on GitHub

- Built an inline firewall that screens prompts before they reach an LLM to detect prompt injection, jailbreaks and harmful intent, using 5 layers: harm keywords, 95+ regex rules, TF-IDF + Logistic Regression, Gemini analysis and fusion scoring.
- Scores prompts 0–100 to ALLOW, SANDBOX (sanitised rewrite) or BLOCK; added a 5-agent pipeline (Inspector, Behavior, Judge, Decoy, Guardian) for session tracking, verdicts and output auditing.

Face Recognition Attendance System | Python • OpenCV

- Built a webcam-based system that detects and recognises faces in real time and records attendance automatically.
- Developed an HTML/CSS dashboard to view attendance records, reducing manual effort.

Crowd Safety Monitoring System | Winner – Hack-It-Out 2.0

- Designed a prototype to monitor crowd conditions and support public safety, built under hackathon time constraints.
- Won 1st place for solving a real-world safety problem with a working demo.

FoodConnect – Zero Hunger Platform | Winner – DevSprint Mini Hackathon 2026 — View Live Project

- Built a platform connecting food donors, restaurants, NGOs and people in need, with multi-role authentication and NGO hub management.
- Added GPS-based impact maps (Leaflet), last-mile delivery workflow, restaurant tax-certificate feature and a partner reward store.

Yatri – Multimodal Journey Planner | Qualified Round 2 – Yatri Hackathon 2025

- Developed backend APIs and route-planning logic using Dijkstra's and A* algorithms across bus, metro and train modes.
- Implemented fare calculation and journey alerts using Firebase Cloud Messaging with mock GTFS transport data.

Mining Vehicle Safety System | Concept & Architecture Design

- Proposed a "Dynamic Digital Safety Bubble" that adjusts a vehicle's safety zone using visibility, speed and sensor confidence, with edge processing, wireless communication and a fleet dashboard.

IoT Mini Projects | Arduino • ESP32

- Built an IR sensor detecting system and an automatic visitor counter using Arduino/ESP32 and sensors.

ACHIEVEMENTS

- **Winner –** Hack-It-Out 2.0 (Crowd Safety Monitoring System)
- **Winner –** DevSprint Mini Hackathon 2026 (FoodConnect) [Project Link]
- **Qualified for Round 2 –** Yatri Hackathon 2025 (Multimodal Journey Planner)
- **Third Place –** Technical Mystery Event (Technical Hunt)
- Attended AWS Mumbai developer meetup

EXTRA-CURRICULAR & INTERESTS

- **Web & Content Management Head, Cultural Committee, TSEC:** led web and content work, contributed to recruitment drives and branding, and created logos and promotional designs (Canva, Photoshop, basic Figma).
- Active in developer communities and hackathons; interested in AI, IoT and building products that solve real problems.