Grefith Gohel

Gandhinagar grefithgohel90@gmail.com 8000712252 Grefith Gohel Grefith

Education

LDRP Institute of Technology and Research, Gandhinagar *Sept 2022 – May 2026*
BE in Computer Science

- CPI: 7.62

Experience

OpsFabric *Sep 2025 - present*
Agentic AI Developer Intern

- Developed multi-agent AI systems using LangChain/LangGraph for autonomous task execution and research workflows.
- Integrated custom tools for code analysis, document summarization, and API-based operations.
- Improved reasoning and reliability through optimized prompting, context windows, and error-handling layers.

21Twelve Interactive LLP *Sep 2025 - present*
AI Automation Engineer Intern

- Built automation pipelines using n8n, Zapier, HubSpot, and AI modules for sales and operations.
- Designed CRM automation flows for lead syncing, email campaigns, and lifecycle updates.
- Automated reporting dashboards and internal notification systems.

Zappigo Power Plug PVT.LTD *Aug 2024 - Jan 2025*
Project Manager & Team Leader

- Led the development of a marketing website to showcase Zappigo's products and company information.
- Managed a cross-functional team, ensuring smooth coordination between developers, designers, and stakeholders.
- Oversaw the project lifecycle from planning to deployment, ensuring timely delivery and quality assurance.
- Implemented UI/UX best practices to enhance user experience and engagement.
- Collaborated with clients to align the website with brand identity and business goals.

Pransh Study And Career Point *May 2025 – May 2025*
Java Web Development Intern

- Completed an internship focused on Java web development and full-stack fundamentals.
- Collaborated with mentors to follow best practices in clean coding, MVC architecture, and deployment workflows.

TatvaSoft *May 2025 – Jun 2025*
Intern – .NET & Angular Development

- Completed a 15-day internship focused on .NET and Angular technologies.
- Gained practical exposure to frontend and backend integration in web application development.
- Assisted in developing and testing modules, enhancing skills in C#, ASP.NET, Angular, and database connectivity.
- Implemented UI/UX best practices to enhance user experience and engagement.
- Demonstrated adaptability, quick learning, and strong commitment to software development best practices.

ResearchWork & Publications

FedCarbonNet- An AI-Blockchain-IoT Framework for Carbon Footprint Management and Optimization

(Co-authored with Vishal Barot, Dev Jani)

Accepted at ICDSA 2025 (International Conference on Data Science & Applications); currently under publication review.

User-Interactive Federated Learning for Automated Endpoint Intrusion Detection with Real-Time Visualization and Incremental Threat Adaptation

(Co-authored with Vishal Barot, Dev Jani)

Accepted at ICMLDE 2025 (4th International Conference on Machine Learning and Data Engineering); currently under publication review.

Certifications

- AWS Academy Machine Learning Foundation April 2024 (cetificate)
- DSA with C/C++ by Pregrad Sep 2023 (certificate)
- NPTEL Soft Skills and Personality Development by IIT-Kanpur April 2023 (certificate)
- Online Summer School on Usefulness of Remote Sensing & GIS on Environmental Studies by INDIAN INSTITUTE OF REMOTE SENSING, ISRO DEHRADUN Aug 2021 (certificate)

Projects

Kshitij – Smart India Hackathon Project *Github*
Team Leader — Oct 2024

- Developed an interactive platform for exploring India's history using a chatbot and AR/VR modules.
- Integrated AI-driven historical query responses and immersive learning features.

Flipkart Grid 6.0 Smart Vision Challenge *Github*
Team Leader — Oct 2024

- Built an AI-based inspection system for barcode verification and product classification on conveyor belts.
- Implemented detection for shape, size, color, and damage; added IR sensor-based real-time product counting.
- Implemented AI-based detection for shape, size, color, and damage assessment of products.
- Integrated an IoT-based IR counting system to track the number of products in real time.

Virtual Try-On System using AI & Computer Vision *Github*

- Built a real-time virtual try-on application using MediaPipe Pose, OpenCV, and custom outfit overlay algorithms to detect user posture and simulate garment fitting.
- Enhanced the system with LLM-based recommendations (GPT-Neo), dynamically suggesting outfit styles based on body shape analysis from pose landmarks

SSIP Hackathon — AI-Based Air Pollution Monitoring System
Team Leader — March 2025

- Designed ML models for forecasting pollution hotspots (PM2.5, NO) using temporal and geospatial data.
- Developed a real-time visualization dashboard for trend analysis and public health insights.

AI-Powered Code Review & Workflow Orchestration System

- Built an automated code-review agent using LangChain/LangGraph integrated with Jira, Slack, and GitHub.
- Enabled LLM-based review summaries and dynamic Slack notifications within a scalable, event-driven architecture.

SSIP Hackathon — Real Time Traffic Monitoring System
IOT Develpoer — March 2025

- Currently leading the development and simulation workflow using SUMO for traffic modeling, NS-3 for network communication (V2V/V2I), and OpenStreetMap (OSM) for real-world road integration.
- Overseeing the integration of IoT sensors, YOLOv8 object detection, and LSTM-based prediction models in Python for real-time congestion analysis and decision-making.

- Coordinating with local authorities to ensure alignment with urban mobility and smart city infrastructure goals.

Research Projects

FedCarbonNet – Federated AI-Blockchain-IoT Framework for Carbon Footprint Optimization
Under Publication at ICDSA 2025

- Designed a distributed carbon emission monitoring system using Federated Learning, enabling energy meters, lab sensors, and generator sensors to train models locally without sharing raw data.
- Implemented secure gradient aggregation with differential privacy and model update validation through a permissioned blockchain to prevent tampering or fabricated sensor readings.
- Developed an end-to-end pipeline: sensor → edge FL node → aggregator → blockchain validator → AI dashboard for real-time campus-wide carbon insights.
- Achieved improved privacy, reduced communication overhead, and higher trust through decentralized verification.

UIFL - Unified Intelligent Federated Ledger for Secure IoT Threat Detection (AI + Federated Learning + Blockchain + IoT)
Under Publication at ICMLDE 2025

- Developed UIFL, a secure, decentralized IoT intrusion detection framework that integrates Federated Learning, Blockchain, and Hybrid Deep Learning (CNN-LSTM) to achieve privacy-preserving, real-time threat detection across distributed IoT endpoints.
- A scalable, trustless, privacy-preserving IDS architecture combining Federated Learning + Blockchain + User Interaction, capable of real-time adaptation and secure collaborative learning across IoT environments.
- Designed a blockchain-secured FL aggregation layer using PBFT consensus, ECDSA signatures, and SHA-256 integrity checks to prevent poisoning attacks and ensure verifiable model updates
- Trained and evaluated the model on MQTT, UNSW-NB15, ToN-IoT, and CIC-IDS-2018 datasets, achieving 99.66% accuracy and 98.75% F1-score, with user feedback improving recall by 18.17%

Technologies

Languages: C, C++, Java, Python, PHP, SQL, HTML, CSS, MySQL

AI & Machine Learning: YOLOv8, Deep Learning (DL), Computer Vision, Real-Time Prediction Systems, Gemini LLM, GPT-Neo, LangChain, LangGraph

Automation & Workflow Tools: n8n, Apify, Google Sheets API, Lead Automation, Nano Banana (AI Video Generator), Zapier, Cron Jobs, Slack API

Simulation & Networking: SUMO (Traffic Simulation), NS-3 (V2V/V2I Communication), Omnet++, Veins, Inet, OpenStreetMap (OSM), Traffic & Network Modeling

Soft Skills: Leadership, Communication, Collaboration, Problem-Solving, Time Management, Adaptability, Critical Thinking, Conflict Resolution, Decision Making, Mentorship.

Achievements

Finalist - IIT Hyderabad AI Ideathon (Top 10 for Carbon Footprint AI).

Finalist - Smallest AI Hackathon, San Francisco (AI Sustainability).

Finalist - Startup Spotlight (BharatVR Innovation Pitch).

SemiFinalist - Flipkart Gird 6.0

Summary

Driven and innovative Computer Engineering student with expertise in AI research, Federated Learning, Machine Learning models, Computer Vision, Agentic AI systems, and IoT-based intelligent automation. Published at leading conferences including ICDSA 2025 and ICMLDE 2025, with hands-on experience building scalable, real-time systems for intrusion detection, carbon emission optimization, and multi-agent workflow automation. Skilled in designing complete research pipelines ranging from architecture design to experimentation and evaluation supported by strong leadership and problem-solving abilities. Passionate about creating impactful, user-centric AI/ML solutions and highly motivated to apply these skills in real world. Where I can contribute meaningfully while continuing to grow as a researcher and engineer.