



Shivansh Ghelani

Intern - Trainee

Gandhinagar, Gujarat, India

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Shivansh-Portfolio

Languages

English	Hindi	Gujarati
Fluent	Fluent	Native

Education

Swaminarayan Dham International School

ICSE Board

86.7%

March-2020

Secondary Examination

Swaminarayan Dham International School

Science -GHSEB Board

65.5%

March-2022

Higher Secondary Examination

L.D.R.P-ITR

Information Technology

7.00 SPI

MAY-2025 Present

Bachelor's of Engineering (B.E)

LDRP-ITR

Final year IT student specializing in Python and robotics with a focus on embedded systems and AI/ML. Enthusiastic about developing intelligent autonomous systems and combining software with hardware. Building practical skills through academic projects and self-directed learning to bridge the gap between theory and real-world implementation.

Profiles

ShivanshGhelani

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Skills

Programming Languages

Proficient: Python, C++, C, HTML/CSS, JavaScript Familiar: Rust, Bash, Arduino, TypeScript

MicroPython, FastAPI, Flask, AI/ML

Machine Learning & AI

Transformers, LLMs (Groq, Hugging Face), LangChain OCR (Tesseract, LayoutParser), Speech Recognition (Wav2Vec, Whisper) Text-to-Speech (Coqui, TTS Transformers), NLP tasks (translation, summarization)

Computer Vision

OpenCV, image preprocessing, lane detection, document layout analysis Real-time camera integration for robotic vision and OCR

Embedded Systems & Robotics

ESP32, ESP32-S3, Arduino Uno/Nano 33 BLE Sense Mecanum wheel control, PID tuning, IR sensor arrays, ultrasonic modules Line following, obstacle avoidance, voice-controlled navigation

ROS/ROS2, SLAM, Gazebo

Analytical & Problem Solving

Strong logical reasoning and debugging mindset Passionate about optimizing systems through iteration and feedback Able to break down complex technical challenges into solvable parts

Communication & Collaboration

Clear technical communicator — in documentation, code comments, and presentations Experience working collaboratively on GitHub with feedback loops and version control Comfortable explaining AI and robotics concepts to non-technical audiences

What I Can Bring to Your Team

- Technical Versatility:** Proficient in Python, FastAPI, machine learning, embedded systems (ESP32, Arduino), and frontend technologies. I can adapt to both backend and robotics-related challenges.
- Problem-Solving Mindset:** I proactively identify problems and design scalable, efficient solutions—whether it's gesture-controlled systems or semi-autonomous robots.
- AI + Robotics Synergy:** With a strong interest in autonomous vehicles and smart robotics, I bring the ability to integrate AI models into real-world hardware systems.
- Continuous Learner:** I regularly take advanced courses (e.g., FastAPI, Data Science, ML) and apply them to personal and academic projects.

Projects

4WD Semi-Autonomous Rover

January 2024

Robotics Project

[Github Repo](#)

Semi-autonomous Mecanum-wheel robot with voice-controlled and manual driving modes. Equipped with IR sensors, ultrasonic range detection, and computer vision for Gesture Based hand Controlled

ESP32, PID, Ultrasonic, IR Sensors, Computer Vision, Mecanum Wheels, Voice Control, Robotics

Myra AI Assistant (LLM-Powered)

March 2024

AI Chatbot

[Myra-Chatbot](#)

AI-powered assistant built using Groq LLM to handle tasks like summarization, document translation, neural speech synthesis, and OCR. Built modular tools and deployed as a seamless chatbot.

LLM, Groq, Chatbot, Translation, Summarization, AI Tools, FastAPI, Python

Smart OCR System

February 2024

OCR Tool

[OCR-Github Repo](#)

Built an OCR web app for extracting and processing typed text from documents. Supports multi-language translation and summarization for scanned documents.

OCR, Text Extraction, Tesseract, FastAPI, Translation, Summarization, Python, Computer Vision

Neural TTS + Speech Recognition

MAY-2025

Web Service

<https://myra-tts.vercel.app/>

Text-to-Speech and Speech-to-Text web system with automatic language detection, male/female voice options, and distinct robotic voice characteristics for specialized applications. Integrated with real-time speech recognition for AI assistant and accessibility tools.

Text-to-Speech, Speech-to-Text, TTS, STT, AI, Voice Assistant, Natural Language, Python, FastAPI

Translation Service (Myra Translation Module)

APRIL 2025

Web Service

[Translort WebService](#)

Multilingual translation module integrated into Myra Assistant. Supports document-level and sentence-level translations across major global and Indian languages. Designed for accessibility, educational use, and intelligent document understanding.

Translation, Multilingual, AI, LLM, Language Detection, FastAPI, Myra, Python, Web App

VIOR – Video/Image Object Recognition and Scenario Description

January-2025

Computer Vision Project

[VIOR-GithubRepo](#)

Developed a system for real-time video and image object recognition with scenario description capabilities, leveraging deep learning models to identify and interpret objects in diverse environments.

Gesture Based Volume Control

MAY-2024

Computer Vision Project

[GBVC](#)

Implemented a system to control audio volume using hand gestures detected through sensors or camera input, enabling touchless and intuitive volume adjustment.

Volunteering

LDRP-ITR ,KSV

February-2024 and February-2025

Xenesis -Stage Community Volunteer

Gandhinagar

Volunteered as Stage Community Volunteer, assisting in event organization, stage management, and supporting community engagement activities to ensure smooth event execution.

LDRP-ITR ,KSV

January-2025

Ideathon Event-Lead Volunteer

Gandhinagar

Led and coordinated volunteer activities at LDRP-ITR, KSV, managing event logistics, volunteer teams, and communication to ensure smooth execution of events and initiatives. Acted as a key point of contact between the organization and volunteers, enhancing engagement and collaboration.

Certificates

MissionChandra – 2nd Runner Up

October 2023

SAC-I.S.R.O ,D.O.T and GUJCOST Organized

Gandhinagar

Project - Design and Working model of launch vehicle

2nd Runner Up in the final round of MissionChandra competition by designing and building a functional launch vehicle model.

NPTEL Certificate – Python with Data Science

August -2024

NPTEL

Gandhinagar


Completed NPTEL course on Python for Data Science, covering data analysis, visualization, and manipulation with Python libraries. Scored 67%.

MyEquation ROBO-Coral

24th June ,2024

MyEquation

Online-Workshop

 [MyEquation](#)


Finished foundational 3-day robotics training focusing on core concepts and practical implementations in robotics.

MyEquation ROBO-AI

30th July - 20th Sept ,2024

MyEquation

Online-Workshop

 [MyEquation](#)

Completed 45-day intensive training on AI and Robotics, covering AI model development, embedded systems, and robotics applications.

MegaHack Hackathon

March-2024

24-Hour Hackathon

Palghar

Awarded certificate for participation in MegaHack, demonstrating skills in hackathon challenges, problem-solving, and collaborative development.

Project - Automatic License Plate Recognition and Parking System

Science Fair

February 2024 & 2025

Organized by KSV

Gandhinagar

Participated in the Science Fair a robotics-based project showcasing an intelligent navigation system.Demonstrated skills in real-time obstacle avoidance, sensor integration, and voice-based control in autonomous vehicles.

Science Fair 2024 : Line Following Robot

Science Fair 2025 : 4WD Robo-Car with Manual, VoiceControlled, ComputerVision Based Gesture Controlled

Udemy-Certifications

Data Science and Machine Learning Bootcamp with Python
Jose portilla, Pierian Training

December-2024

Completed a comprehensive course covering essential concepts of Data Science and Machine Learning using Python. Gained hands-on experience with statistical analysis, data visualization, linear regression, decision trees, and various ML algorithms through real-world projects.

Python with Flask – Web Development Framework
Horizon Tech

January -2025

Completed a comprehensive course on Python with Flask, including RESTful routing, templating with Jinja2, SQLAlchemy integration, and deployment of web applications.

FastAPI – The Complete Course
Udemy

March-2025

Completed a comprehensive course covering FastAPI from fundamentals to advanced concepts. Learned to build high-performance, production-ready APIs with asynchronous Python, Pydantic models, dependency injection, OAuth2 authentication, background tasks, database integrations (SQLAlchemy), and deployment strategies for real-world web applications.