

# Devkumar Patel

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## EDUCATION

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- **LDRP Institute of Technology and Research, Gandhinagar** 2023 - 2027  
*BE in Computer Engineering*
- **Indian Institute of Technology, Madras** 2023 - 2027  
*BS in Data Science*
- **Jawahar Navodaya Vidyalaya, Mehsana** 2016 - 2023  
*Higher Secondary Education (PCM)* 82%

## PERSONAL PROJECTS

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- **Messy Mashup – Music Genre Classifier** 2026  
*Deep Learning audio classification using PyTorch, Librosa, and Hugging Face*
  - Designed and trained a deep learning model for music genre classification under noisy and mixed-track conditions, extracting audio features via MFCCs and mel-spectrograms using Librosa
  - Achieved **0.884 Macro F1 Score** across 10 genre classes on Kaggle, evaluated under class-imbalance conditions; deployed as a live inference app on Hugging Face Spaces
- **ASTRA – Conversational AI Agent** 2025  
*LLM agent with RAG pipeline, Groq LLaMA API, MongoDB Atlas, and Streamlit*
  - Architected a modular LLM-powered conversational agent with persistent long-term memory via MongoDB Atlas, enabling context-aware multi-turn dialogue across sessions
  - Integrated Groq LLaMA API for low-latency inference and implemented a RAG pipeline within a Streamlit interface, grounding responses in dynamically retrieved context
- **Autonomous SQL Agent & ETL Pipeline** 2026  
*Agentic AI system using LangChain, ReAct pattern, GPT, SQLite, and pdfplumber*
  - Built an end-to-end ETL pipeline extracting structured data from 50+ invoice PDFs using pdfplumber and Camelot, loading normalized records into a relational SQLite database
  - Implemented a ReAct-pattern autonomous SQL agent using LangChain and GPT to translate natural language business queries into executable SQL with zero manual intervention
- **JustRentIt – Smart Rental Marketplace** 2025  
*Full-stack web application using Next.js, Node.js, MongoDB, and Vercel*
  - Developed a full-stack rental marketplace with user authentication, property listings, reviews, and an admin dashboard using Next.js and MongoDB, deployed on Vercel
  - Engineered RESTful APIs for end-to-end CRUD operations, integrating frontend, backend, and database layers into a scalable, production-ready application

## TECHNICAL SKILLS

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- **Languages:** Python, JavaScript, SQL, C++
- **ML & AI:** PyTorch, TensorFlow, Scikit-learn, LangChain, Hugging Face, OpenCV, Librosa, Streamlit
- **Web Development:** React, Next.js, Tailwind CSS, REST APIs, Supabase
- **Data & Databases:** Pandas, NumPy, MongoDB, SQLite, MySQL, AWS S3
- **Tools & Platforms:** Git, GitHub, Vercel, Linux, Docker, n8n, GCP, Kaggle
- **Domains:** Deep Learning, LLM Agents & RAG, ETL Pipelines, Computer Vision, Front-end Development, Data Analysis, Data Scientist, Artificial Intelligence, Machine Learning

## ACHIEVEMENTS

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- **Advanced Certificate in Machine Learning and Data Science** *2025*  
Awarded by IIT Madras upon completing all Diploma in Data Science theory subjects and project
- **All India University Handball Tournament** *2024-2025*  
2-time participant representing university at national inter-university level
- **Dual Degree – IIT Madras & LDRP-ITR** *2023*  
Simultaneously pursuing BS in Data Science (IIT Madras) and B.Tech in Computer Engineering
- **Sports Captain, JNV Mehsana** *2023*  
Led and represented school in Navodaya Vidyalaya Samiti at national level
- **SGFI Handball** *2019*  
3rd Position in Under-14 National Tournament