

# KUSHRAJSINH ZALA – Resume

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## Professional Summary

AI/ML Engineer with a robust background in Large Language Models (LLMs), RAG architecture, and Generative AI. Skilled in building real-world solutions using LangGraph, LangChain, LangSmith, Transformers, and vector-based retrieval systems. Proven ability to integrate LLMs into web applications using Python, Streamlit, and Django. Completed impactful internships at Petpooja and Zidio Development, delivering intelligent systems including personalized assistants and chatbots. Passionate about creating production-ready, scalable AI tools.

## Education

Bachelor of Engineering – AIML

L.J. Institute of Engineering and Technology

### CGPA Summary:

Semester 1: 5.94 Semester 2: 5.27

Semester 3: 5.92 Semester 4: 5.44

Semester 5: 5.86 Semester 6: 7.45

Semester 7: 6.50 Semester 8: 8.53

### Overall CGPA: 6.24 / 10

10th & 12th (Science, Group A): Brahmanand Vidhyalaya, Dhrangadhra – 80% (Both)

## Experience

### Data Science Intern – Petpooja (Apr 2025 – Oct 2025)

- Gained hands-on experience with advanced AI frameworks including LangChain, LangGraph, and LangSmith, focusing on Generative AI and agentic workflows.
- Explored and analyzed Petpooja's internal model pipelines, enhancing understanding of real-world production AI systems.
- Studied end-to-end deep learning workflows and model deployment strategies used in large-scale platforms.
- Strengthened skills in designing and building scalable AI models aligned with real business use cases.

### Data Science Intern – Zidio Development (Oct 2024 – Dec 2024)

- Worked on customer segmentation and clustering algorithms using K-Means and visualization libraries.
- Performed EDA, handled large CSVs, and derived insights for data-driven decisions.
- Built predictive scripts and assisted in ML evaluation for early-stage prototypes.

## Projects

### RAG-Based Document Chatbot

Built a document-aware chatbot using LangChain, FAISS, and Groq's LLaMA 3. Supports PDF upload, chunking, BGE embeddings, semantic retrieval, and context-aware QA via a Streamlit UI.

### LangGraph ChatFlow with Memory Retention System

Multi-threaded assistant using LangGraph and Gemini 1.5 Flash with SQLite-based memory checkpointing. Includes dynamic thread naming and multi-turn memory in a Streamlit UI.

### **AI-Powered Smart Kitchen & Waste Minimizer for Restaurants**

Built an intelligent kitchen assistant that identifies expiring ingredients and recommends personalized recipes, leveraging Python, Pandas, and the Google Gemini API.

### **Portfolio Personal Assistant Chatbot**

Embedded on portfolio using LangChain + Streamlit. Answers queries about CV, education, and project history using restricted, embedded personal data.

### **Handwritten Digit Recognition**

CNN on MNIST with dropout, batch norm, and ReLU; >98% accuracy with interactive inference.

### **Blog API with Django**

REST API with JWT auth, CRUD, and pagination; secure, scalable architecture.

### **To-Do List Web App**

Django app with auth, dynamic task filtering, and full CRUD; Bootstrap UI.

### **Employee Leave Management System**

Flask/Django OOP system with PostgreSQL, manager approvals, and status tracking.

## **Skills**

- Languages: Python, JavaScript, TypeScript, Java
- LLM & AI Frameworks: LangChain, LangGraph, LangSmith, Transformers, RAG, FAISS, Hugging Face, OpenAI API, Gemini API, Groq API
- AI Tools: ChatGPT, Gemini, GitHub Copilot, Perplexity AI
- Frontend: React.js, Next.js, HTML5, CSS3, Tailwind, Bootstrap
- Backend: Django, Flask, RESTful APIs
- Databases: PostgreSQL, MongoDB, SQLite, SQL
- Dev Tools: Streamlit, Git, GitHub, Power BI, VS Code

## **Certifications**

- Machine Learning with Python – IBM
- Building Generative AI-Powered Applications with Python – IBM
- Back-End Development with .NET – Microsoft
- Data Structures – University of California, Santa Cruz
- HTML, CSS, and JavaScript for Web Developers – Johns Hopkins University
- C for Everyone: Programming Fundamentals – University of California, Santa Cruz
- Algorithmic Thinking – Rice University