

Kathan Modh

Software Engineer | AI / Backend / Full-Stack Developer

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Ahmedabad, Gujarat, India | Open to Relocation / Remote

Summary

Software Engineer and Computer Science & Engineering undergraduate (CGPA 9.46/10, graduating 2027) who designs, builds, tests, and ships production software end-to-end. **Full-stack and backend engineering** (Python, .NET, React, Node.js, REST APIs) combined with **applied AI** (LLMs, RAG, agentic AI) and a **test-first discipline** (125 automated tests, CI/CD). Strong CS fundamentals - data structures, algorithms, system design (NPTEL Top 2%) - with a published open-source package and a system deployed in production and used daily.

Skills

Languages: Python (primary), C++, C#, JavaScript, TypeScript, SQL, Bash

Backend & Full-Stack: .NET / ASP.NET Core, FastAPI, Flask, Node.js, React, Angular, REST APIs, Microservices, Entity Framework Core, WebSocket, Redis

AI / ML: LLMs, Generative AI, RAG, Fine-tuning, LangChain, Agentic AI / AI Agents, MCP, PyTorch, HuggingFace Transformers, FAISS / Vector Databases, OCR

Testing & DevOps: Test-Driven Development, Automated Testing, Playwright, Unit & Functional Testing, CI/CD, Docker, Git, Linux, Agile / Scrum

Data & Cloud: PostgreSQL, SQL Server, MongoDB, Pandas, NumPy, AWS, Microsoft Azure, GCP, OCI, ETL, Selenium

CS Fundamentals: Data Structures & Algorithms, OOP, DBMS, Operating Systems, System Design, Distributed Systems, Complexity Analysis

Work Experience

Altum Labs

Ahmedabad, India

Software Development Consultant

June 2026 - Present

- Architected and shipped a **production full-stack system** (IT Asset Management, deployed on Azure and used daily) on a **6-layer architecture** using **.NET, Angular, EF Core, and SQL Server**, secured with JWT + Azure AD.
- Built and evaluated **production LLM and agentic AI features** on **LangChain + MCP** - a data-extraction pipeline reaching **95%+ accuracy across 500+ sources**, plus OCR and chatbot microservices - with an evaluation harness for reliability.
- Wrote **125 automated tests** (xUnit + pytest) with **Playwright and CI/CD**, and reduced batch inference latency **12.8%** and manual verification **60%** through optimization and validation.

WORK24 (Raidlayer Webhost Pvt. Ltd.)

Ahmedabad, India

Software Developer Intern (Project-based)

May 2025 - June 2025

- Built a **Selenium web scraper** extracting **Google Cloud usage data** for a data-analytics client, **bypassing proxy and anti-bot blocking** through low-level request handling - tested across many websites.
- Delivered a **RAG-powered document chatbot** for a Dubai law firm, and automated backend workflows with **Python/Flask**, raising system uptime from **94% to 99%**.

Projects

LatentGate - Open-Source LLM Optimization Pipeline [\[PyPI\]](#)

Python, FastAPI, MCP

- Independently built and **published an open-source PyPI package** (with an MCP server) reducing **LLM API costs ~80%** - clean, documented, tested code.

DevMirror - Real-Time Collaborative Code Editor [\[Live\]](#)

React, Node.js, Redis, WebSocket

- Built a **scalable real-time system** (React frontend) supporting **10+ languages** with **Redis pub/sub** for distributed event handling and low-latency sync.

ExamGenie - Transformer Research (Multilingual QG)

Python, HuggingFace, PyTorch

- Fine-tuned **T5/BERT models** achieving **0.42 BLEU / 0.61 ROUGE-L** across 3 languages, contributing to PhD-level NLP research. (*Targeting EMNLP 2027.*)

Awards & Certifications

- Winner** - WiBD GenAI Hackathon 2026 (100+ teams) | **Winner** - Techtonic 2025 | **Finalist** - Smart India Hackathon 2024 | **5th Place** - IBM BoB AI Innovation Hackathon 2026, CHARUSAT (650+ teams) | **Top 2%** - NPTEL Data Structures & Algorithms (50,000+ nationwide)
- Certified:** [Google Cloud Engineering](#) | AWS: [Generative AI Foundations](#) & [Cloud Developing](#) | Oracle: [Agentic AI](#) & [OCI AI](#) | [Salesforce Agentblazer 2026](#) | IBM ML with Python | MERN Full Stack (Packt)

Education

Charotar University of Science and Technology (CHARUSAT), Anand, Gujarat

July 2023 - May 2027

Bachelor's (BTech) in Computer Science & Engineering | CGPA: 9.46 / 10.0

Indian Institute of Technology (IIT) Mandi, Mandi, Himachal Pradesh

March 2025 - November 2026

Minor in Data Science, Online Degree Program