Kunal Kumar Shaw

Applied AI & Generative Systems Engineer

CONTACT

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- GitHub

TECHNICAL SKILLS

- Python
- C++
- Java
- JavaScript
- Kotlin
- Advanced NLP
- TensorFlow
- PyTorch
- Pandas
- NumPy
- Git/GitHub
- Jupyter Notebook
- Feature Engineering
- Python
- Scikit-learn
- TensorFlow
- XGBoost
- LightGBM
- CatBoost
- Hugging Face Transformers
- LangChain
- LangGraph
- Retrieval-Augmented Generation (RAG)
- Prompt Engineering
- Sentence Transformers
- Vector Databases
- Tokenizers
- ETL Pipelines
- Data Cleaning
- Data Visualization
- AWS
- Docker
- FastAPI
- REST APIs
- CI/CD
- Postman
- MySQL
- PostgreSQL
- Vector Databases (FAISSChromaDB)
- System Design Basics
- Caching
- API Integration
- Data Structures
- Algorithms
- OOP
- Cloud Deployment
- JIRA
- Agile
- Unit Testing
- Integration Testing

SUMMARY

Applied AI & Generative Systems Engineer specializing in architecting end-to-end intelligent systems, LLM-driven automation workflows, and scalable RAG pipelines. Proficient in Python, PyTorch, LangChain, Hugging Face, vector databases, and AWS serverless compute. Constructed production-grade solutions including Natural language to SQL translation engines, multi-source knowledge orchestration frameworks, and real-time predictive analytics. Demonstrates strong algorithmic rigor with 400+ LeetCode problems solved and a top 6% global ranking. Committed to building robust, high-throughput, enterprise-grade AI solutions.

EDUCATION

Indian Institute of Information Technology (IIIT), Raichur   **Karnataka, India**
B.Tech in Computer Science and Engineering   *Aug 2023 - July 2027*
CGPA: 8.2 / 10

WORK EXPERIENCE

➤ **Indian Institute of Information Technology (IIIT), Raichur**
Deeplabs Club Coordinator   *Dec 2024 - Present*

Led and managed the AI/ML Club (DeepLabs), overseeing machine learning project development, technical workshops (e.g., NLP, RAG, and Agentic AI), and mentorship sessions to enhance members' technical skills in data science and applied AI. Organized collaborative hackathons and AI-focused hackathons, fostering innovation and teamwork while promoting best practices in model development and MLOps.

PROJECTS

Real-Time System Monitoring with AI Predictions   GitHub

- → Built and deployed an **end-to-end**, **Dockerized** real-time **monitoring and prediction** platform.
- → Implemented **anomaly detection** and **multi-step forecasting** for proactive, high-fidelity system insights.
- → Integrated **LLM-driven root-cause analysis**, enabling **natural-language diagnostics** and automated remediation.

NaturalSQL-AI   GitHub

- → Developed production **NL→SQL translation** engine with schema-aware prompting and execution.
- → Deployed API-backed **semantic parsing** pipeline using **embeddings**, **LangChain**, and vector DB.
- → Enforced rigorous **query validation**, execution **sandboxing**, and **SQL injection mitigation**.

RecomX   GitHub

- → Designed and executed the end-to-end pipeline, powering **real-time personalized product suggestions.**
- → Delivered a scalable, observability-focused **serverless backend**, enabling high-throughput, low-latency recommendations.
- → Engineered the monetization and **compliance layer**, supporting secure subscriptions and **privacy-safe data.**

CERTIFICATES

- AWS Cloud Practitioner Essentials
- Complete Generative AI Course with Langchain and Huggingface
- Machine Learning A-Z
- Youth and Leadership Workshop at V-LEAD, Mysuru