

# Tanmay Mishra

AI Engineer | Data Scientist

☎ +91 9958301087 | 🌐 [tanmaymishra.com](https://tanmaymishra.com) | [in](#) [Linkedin](#) | [G](#) [Github](#) | ✉ [tanmaymishra0108@gmail.com](mailto:tanmaymishra0108@gmail.com)

## Professional Experience

### Kadit Innovation | AI Engineer

2024 - Present

- Developed and deployed ML and GenAI models using Python, PyTorch and OpenAI APIs, improving decision making efficiency by 30% in NLP focused business applications.
- Built and productionized LLM powered RAG agents and assessment bots using LangChain, Neo4j and ChromaDB reducing latency by 40% and automating HR workflows with real time scoring and feedback.
- Delivered [domain specific LLM](#) PoCs to clients with 30% improved contextual accuracy through fine tuning and prompt engineering, ensuring scalability and deployment readiness.

### DRDO | Deep Learning Intern

Jun - July 2023

- Developed a CNN based model for handwritten digit recognition using the MNIST dataset, achieving 98% test accuracy through data augmentation and hyperparameter tuning.
- Optimized model performance through hyperparameter tuning and dropout techniques, reducing overfitting by 15% and ensuring reliable performance on unseen data.

## Technical Skills

- MLOps:** Python, FastAPI, Git, Docker, Kubernetes, AWS SageMaker, REST APIs, Google Colab
- Frameworks:** TensorFlow, PyTorch, Hugging Face Transformers, LangChain, LangGraph, CrewAI
- Generative AI:** LLMs, RAG, LoRA, Text Embeddings, Prompt Engineering, NLP, AI Agents
- Data Science:** Machine Learning, Deep Learning, EDA, CNN, XGBoost, Scikit-learn, F1/ROC Metrics
- Databases & Vector Stores:** PostgreSQL, SQL, Pinecone, ChromaDB, Neo4j
- Web Technologies:** HTML, CSS, JavaScript, C++

## Industrial and Academic Projects

### LLM Powered Protein Search API

- Developed and deployed a production grade FastAPI system for intelligent protein search using Neo4j, LangChain and OpenAI, enabling contextual synonym resolution and motif classification.
- Deployed on AWS with async architecture and integrated biomedical data from UniProt and HGNC to deliver real-time, scalable insights for client facing applications.

### AI Powered Assessment Bot

- Developed a GenAI based system using OpenAI APIs to dynamically generate coding assessments tailored to user profiles, with real time evaluation through prompt engineering, auto scoring and personalized feedback.
- Integrated PostgreSQL for secure user data storage and automated email reporting to HR, reducing manual screening efforts and enabling scalable candidate evaluation.

### Handwritten Digit Recognition System

- Developed a CNN based digit recognition model using the MNIST dataset, achieving 98% accuracy through data augmentation and dropout techniques.
- Collaborated with DRDO scientists to optimize model generalization and deployed the solution via Flask for real-time handwritten digit prediction.

## Academic Qualifications

2024	AKTU	B.Tech (Computer Science and Engineering)	8.2 CGPA
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## Publication

- Presented a paper on Handwritten Digit Recognition using CNN at IEEE ICSAI 2024, achieving 98% accuracy on MNIST. [Link](#)
- Published findings from DRDO internship on deep learning applications in pattern recognition and automation.