

ANIMESH VIJAY KEWALE

ML Engineer | Data Scientist | AI Engineer (Student)

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DOMAIN/FUNCTIONAL AREAS

- Deep Learning
- Natural Language Processing
- Machine Learning
- Time Series Forecasting

KEY SKILLS

Programming: Python, SQL, C++ (Basic)

ML & DL: Supervised ML, CNN, RNN, LSTM, GRU, Transformers, NLP

Libraries & Frameworks: PyTorch, TensorFlow, Pandas, NumPy

Time Series: Feature Engineering, Forecasting, Sequence Modeling

Deployment & Tools: Streamlit, Git, FAISS

Statistics: Probability, Inferential Statistics

PROFESSIONAL EXPERIENCE

ALDC – Area Load Despatch Centre (Government of India)

Jan 2024 - Present

- Engineered short-term electrical load forecasting models for a government consultancy, integrating LSTM and CNN-LSTM architectures to achieve 92% forecasting accuracy, enhancing reliability. Designed and implemented a data quality assurance process for ALDC's operational grid data, ensuring MAPE below 5% and consistency across all datasets, which improved downstream analytics
- Used LSTM and CNN-LSTM architectures, achieving 90-95% forecasting accuracy for a government consultancy project.
- Reduced model training time by 15% by optimizing data pipelines and preprocessing steps, enabling faster iteration and deployment of improved forecasting models.

PROJECTS

Sep 2025 – Oct 2025

ISRO GNSS Satellite Error Prediction

Tech: LSTM, GRU, Transformers, GANs, Gaussian Process Regression

- Pioneered a Generative Adversarial Network (GAN)-based system to generate synthetic satellite error data, bolstering model generalization and diminishing prediction errors by 15% on unseen data.
- Spearheaded the development of GAN-based synthetic error generation, improving model generalization and achieving a model performance score in the top 15% relative to prior models.
- Reduced prediction MAPE from 6 → 1-2, exceeding benchmark requirements (4)
- Delivered machine learning model to client 3x faster than the projected timeline, completing deliverables in four months instead of a year, while staying within the allocated budget.

AI-Driven eDNA Taxonomy & Biodiversity Analysis (SIH 2025)

Sep 2025 – Oct 2025

Tech: DNABERT, Transformers, FAISS, HDBSCAN

- Engineered an end-to-end AI pipeline for marine species identification from raw eDNA, processing a database of 25,000+ DNA sequences with DNABERT embeddings and transformer-based models.
- Developed a novel approach for generating k-mer embeddings using transformer-based models, enabling the team to analyze 1M+ DNA sequences and accelerate genomic research.
- Implemented FAISS-based vector similarity search using DNABERT-generated k-mer embeddings, enabling rapid species identification and detecting three novel taxa within eDNA samples, which increased species detection sensitivity by 7%.
- Computed biodiversity metrics (Shannon, Simpson, Chao1 indices) using ML-corrected species abundance estimates to support ecological analysis

WINNER – IIT BHU TECH COMPETITION (2024)

Recognized for building an innovative ML/AI solution and securing the top position among nationwide participants at IIT BHU

EDUCATION

Rashtrasant Tukadoji Maharaj Nagpur University

NAGPUR

Bachelor of Technology - CSE(Data Science)

Aug 2023 - Present

LANGUAGES

- Marathi (Native)
- Hindi (Native)
- English (Working Proficiency)