Nitin Kumar Mishra

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EDUCATION

Vellore Institute of Technology (2022 – 2026)
B.Tech in Computer Science Engineering, specialization in AI-ML, CGPA: 8.30

SKILLS

Languages : C++ , Python | **Technical skills** : Machine Learning , Deep Learning , Natural Language Processing, Generative AI, LLMs, MLOps | **Libraries & Frameworks** : Numpy, Pandas, Matplotlib, MLflow, Scikit-learn, Tensorflow, Keras, Huggingface, Langchain | **Databases** : MySQL , MongoDB.

PROJECTS

Voice-Activated Form Assistant for Banking Systems
Github/VAFA | *Python, HuggingFace Transformers, scikit-learn, Regex*   March–May 2025

- Designed multilingual NLP pipeline for banking form automation, significantly reducing manual data entry effort. Integrated Web Speech API for real-time speech-to-text and translation (Hindi/English to English).
- Used DistilBERT to classify spoken text into entity labels (e.g., "Name", "Amount") based on context. Prepared a lightweight Regex engine to accurately extract entity values (e.g. amounts, 10-digit phone numbers) from raw transcriptions, post-classification.
- Directed end-to-end pipeline using Streamlit, enabling real-time voice interaction for 500+ test users during beta testing with a F1-score > 0.98.

Network Security System
Github/Network-Security-System | *Python, TensorFlow, Keras, Streamlit*   May–June 2025

- Engineered a modular, ML-driven network security system capable of detecting phishing attempts, threats, and anomalies with a structured pipeline that improved data processing efficiency by 30%.
- Implemented MongoDB and YAML-based configuration workflows to support scalable ingestion of 10,000+ records, enabling reproducible experiments and seamless cloud-ready deployment.
- Built centralized logging and advanced exception-handling layers that reduced debugging time by 40%, along with Dockerized deployment for secure, portable execution and future real-time monitoring integration.

ChurnDefender – Customer Churn Prediction App
Github/ChurnDefender | *Python, TensorFlow, Streamlit, scikit-learn*   January-March 2025

- Built and trained a Deep Learning–based churn prediction model using TensorFlow/Keras, with preprocessing that included label encoding of gender, one-hot encoding of geography, and feature scaling via StandardScaler.
- Implemented efficient model serving by loading trained models and preprocessing pipelines through Pickle, enabling fast inference with zero retraining overhead.
- Developed and deployed an interactive front-end using Streamlit Cloud with intuitive real-time input components (sliders, numeric fields, dropdowns), allowing users to generate live churn predictions with 85% test accuracy.

CERTIFICATIONS & COURSEWORKS

- Attended a five day AI-ML bootcamp, organized by CINE-VAC CDAC – *CDAC*
- Complete Data Science, ML, NLP and DL bootcamp – *Udemy*
- Generative AI with Langchain and Huggingface, Building, Deploying, and Optimizing Generative AI – *Udemy*

ACHIEVEMENTS

- Secured 120th rank (top 5%) among 2000+ teams for developing a machine learning solution in Zelestra X AWS ML Ascend Challenge.
- Active on Codeforces (800+ rating), regularly tackling algorithmic challenges and improving proficiency in data structures and algorithms.
- Completed 160 days of coding challenge on GeeksForGeeks.
- Bagged Silver + Elite certificate in NPTEL Privacy and Security in Online Social media examination.

EXTRA-CURRICULARS

- Commanded the Republic Day Parade, managing and synchronizing a contingent of over 100 participants, reflecting exceptional leadership, organizational abilities, and drill mastery.
- Maintained a rapid rating of 1150+ on Chess.com and a blitz rating of 1350+ on Lichess.
- All India Sainik School Central Zone Football Championship 1st position and InterZone 3rd position.