

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

Sainik School Bhubaneswar (2022)

12th standard, Percentage : 75%

Sainik School Bhubaneswar (2020)

10th standard, Percentage : 82%

PROJECTS

Voice-Activated Form Assistant for Banking Systems

(<https://github.com/HumourSpeech/VAFA>) | *Python, HuggingFace Transformers, scikit-learn, Regex* | March-May 2025

- Designed and deployed 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. Designed a lightweight Regex engine to accurately extract entity values (e.g. amounts, 10-digit phone numbers) from raw transcriptions, post-classification.
- Deployed 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

(<https://github.com/HumourSpeech/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

(<https://github.com/HumourSpeech/ChurnDefender>) | *Python, TensorFlow, Streamlit, scikit-learn* | January-March 2025

- Developed a Deep Learning model to predict customer churn using a trained neural network built with TensorFlow/Keras. Applied preprocessing: label-encoded gender, one-hot encoded geography, and scaled inputs using StandardScaler.
- Integrated real-time user input features including sliders, number fields, and dropdowns for dynamic prediction and loaded trained models and preprocessing pipelines via Pickle for efficient inference without retraining.
- Designed a Streamlit app with real-time inputs (sliders, fields, dropdowns) and deployed it on Streamlit Cloud for interactive user predictions and deployed the app on Streamlit Cloud for public access and live interaction, achieving ~ 85% accuracy on test data

SKILLS

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

CERTIFICATIONS

- Complete Data Science, ML, NLP and DL bootcamp – *Udemy*
- Privacy and Security in Online Social media – *NPTEL*
- Attended a five day AI-ML bootcamp, organized by CINE-VAC CDAC – *CDAC*

ACHIEVEMENTS

- Bagged Silver + Elite certificate in NPTEL Privacy and Security in Online Social media examination.
- Completed 160 days of coding challenge on GeeksForGeeks.
- Active in Codeforces with a rating of 600+, practicing problem-solving and algorithmic thinking.

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.