Nitin Kumar Mishra

Aspiring professional specializing in Machine Learning, Deep Learning, and Natural Language Processing.
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EDUCATION

VIT Bhopal University (2022 – 2026) **Bhopal, India**
B.Tech in Computer Science Engineering, specialization in AI/ML, CGPA: 8.0

Sainik school Bhubneshwar (2021-2022) **Bhubaneshwar, Orrisa**
12th standard, Percentage: 75%

Sainik school Bhubneshwar (2019-2020) **Bhubaneshwar, Orrisa**
10th standard, Percentage: 82 %

PROJECTS

ChurnDefender– Customer Churn Prediction App
(https://github.com/HumourSpeech/ChurnDefender) | *Python, TensorFlow, Streamlit, scikit-learn | Jan-Mar 2025*

- Built an interactive web application using **Streamlit** to forecast customer churn, leveraging a pre-trained deep learning model developed with **TensorFlow** and **Keras**.
- Enabled real-time predictions with user-friendly input widgets like sliders, numeric fields, and dropdown menus.
- Implemented preprocessing techniques including **label encoding** (gender), **one-hot encoding** (geography), and feature scaling with StandardScaler to prepare data for the model.
- Utilized **Pickle** to load the trained neural network and preprocessing pipeline, enabling fast, retrain-free inference.
- Successfully deployed the app on Streamlit Cloud, allowing seamless public access and user interaction.

Voice-Activated Form Assistant for Secure Banking
*(*https://github.com/HumourSpeech/VAFA) | *Python, HuggingFace Transformers, Web Speech API, scikit-learn, BeautifulSoup, Regex | March-May 2025*

- Engineered an **end-to-end NLP** system capable of extracting structured information (Name, Phone Number, Amount, Account Number) from voice inputs in English, Hindi, and Odia.
- Leveraged the **Web Speech API** for real-time voice recognition and language translation to standardize inputs across multiple languages.
- Employed **DistilBERT** for contextual entity classification, achieving an **F1-score > 0.98** for key label identification.
- Developed a custom **regex-based** extraction module to accurately parse entities (e.g., monetary values, contact numbers) from transcribed text.
- Deployed the solution using **Streamlit** to deliver a responsive, real-time voice-controlled form-filling interface.

Sentiment Analysis on Amazon Kindle Book Review
(https://github.com/HumourSpeech/Natural-Language-Processing) **|** *NLTK, BeautifulSoup, Word2Vec | Sep-Nov 2024*

- Built a sentiment classification pipeline using **AvgWord2Vec** for vectorization and Logistic Regression for modelling, boosting accuracy from 57% (TF-IDF) to 82%.
- Executed comprehensive preprocessing: text normalization, removal of stopwords/special characters, stripping of URLs and HTML tags, and lemmatization via **WordNetLemmatizer.**
- Utilized **NLTK** and **BeautifulSoup** to enhance text cleaning and robustness, and optimized model performance with hyperparameter tuning.
- Designed a clean, modular pipeline to support **real-time sentiment inference** for seamless integration into broader applications.

SKILLS

Technical skills : Machine Learning, Deep Learning and Natural Language Processing
Programming Languages: Python, Java, C++
Frameworks and Libraries: TensorFlow, Scikit-Learn, NLTK, SpaCy, Sumy, Gensim, BeautifulSoup, Flask
Databases: SQL, MySQl, MongoDB
Soft Skills: Team Leadership, Cross-functional Collaboration, Agile Workflow

LICENSES AND CERTIFICATIONS

Privacy and Security in Online Social media – *NPTEL*

Complete NLP Bootcamp – *Udemy*

HTML, CSS, and JavaScript for web developers – *Coursera*

Complete Data Analyst Bootcamp – *Udemy*