

HIMANSHU TIWARI

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Education

Vivekananda Institute of Professional Studies

Bachelor of Technology in Artificial Intelligence and Data Science

2023 – Present

Pitampura, New Delhi

Senior Secondary (Class XII), CBSE

Sainik Public School, PCM

2022

Bahadurgarh, Haryana

Secondary School (Class X), CBSE

Sainik Public School

2020

Bahadurgarh, Haryana

Relevant Coursework

- Fundamentals of Machine Learning Analysis
- Deep Learning and Neural Networks
- Linear Algebra and Matrix Computations
- Probability, Statistics, and Data
- Computer Vision Applications
- Introduction to Artificial Intelligence
- Programming for Data Analysis (Python)
- Algorithms and Data Structures
- Natural Language Understanding
- Computational Thinking and Problem Solving

Projects

Text Summarizer | Python, NLTK

April 2023

- Built a basic text summarizer capable of both extractive and abstractive summarization using Python libraries.
- Implemented extractive techniques using sentence scoring and keyword frequency analysis.
- Explored abstractive summarization using pre-trained transformer models for natural language generation.

SignIt: Speech-to-Sign Language Converter | Python, Flask, NLTK

August 2023

- Developed a backend system that converts spoken English into grammatically correct Indian Sign Language (ISL) sentences.
- Designed a rule-based parser to transform standard English SVO (Subject-Verb-Object) structures to ISL SOV (Subject-Object-Verb) format.
- Enabled real-time sentence conversion through a lightweight Flask API for integration with mobile apps.

Music Recommendation System | Python, Scikit-learn, Pandas

January 2024

- Created a music recommendation system that suggests similar songs based on user preferences.
- Used CountVectorizer to compute feature vectors from song metadata such as genre, artist, and lyrics.
- Implemented cosine similarity to generate top-N recommendations for a given input song.

Technical Skills

Languages: Python, SQL

Libraries: NumPy, Pandas, Seaborn, Matplotlib, Scikit-learn

Tools & Platforms: Jupyter Notebook, VS Code, Google Colab, GitHub

Technologies/Frameworks: Flask, TensorFlow

Extracurricular

Smart India Hackathon 2024

March 2024

Team Member – Sign Language Recognition Project

National Level

- Built and trained a Convolutional Neural Network (CNN) model to recognize Indian Sign Language signs from image input.
- Improved model performance from 66% to 96% accuracy through hyperparameter tuning, data augmentation, and architectural refinement.
- Collaborated with a team to develop a scalable solution for enhancing accessibility for individuals with hearing impairments.