

# Yashraj Kastode

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## Education

### Integrated M.Tech Artificial Intelligence

VIT Bhopal University, Bhopal

2022-27

CGPA: 8.47

### Senior Secondary Education (Class 12)

Vivekanand College, Aurangabad, Maharashtra

2022

Percentage: 77.67%

### Secondary Education (Class 10)

Kendriya Vidyalaya, Aurangabad, Maharashtra

2020

Percentage: 92.4%

## Technical Skills

C++, Python, JavaScript, Data Structures Algorithms, Object-Oriented Programming (OOPS), Operating Systems, Computer Networks, Django, NumPy, Pandas, TensorFlow, PyTorch, Git, GitHub, REST APIs, Problem Solving, Debugging, Version Control, Asynchronous Systems

## Projects

### Hindi AI Text Summarizer | Abstractive NLP System

[Link](#)

A production-oriented system for generating abstractive summaries of Hindi text using Transformer models.

- Designed and implemented an **abstractive Hindi text summarization pipeline** using the **google/mt5-base** Transformer model for sequence-to-sequence generation.
- Built a **scalable Django REST backend** with clean service-layer separation for preprocessing, model loading, and inference logic.
- Integrated **Celery with Redis** to offload computationally expensive NLP inference tasks, ensuring non-blocking API performance.
- Implemented a custom **Hindi text normalization pipeline** to handle noisy news data, whitespace artifacts, and linguistic inconsistencies prior to model inference.
- Optimized inference with controlled decoding strategies (**beam search, repetition penalties**) to improve grammatical correctness and summary coherence without model fine-tuning.
- **Tools Used:** Python, Django, Django REST Framework, PyTorch, Hugging Face Transformers, mT5, Celery, Redis, Git

### Med-Matrix | Full-Stack Drug Interaction Checker

[Link](#)

A pharmaceutical safety tool that identifies harmful drug-to-drug interactions based on chemical salts.

- Migrated backend architecture from **Flask** to **Django 6.0**, implementing a robust **RESTful API** and secure **CORS** configurations.
- Developed a **many-to-many comparison algorithm** to detect hazardous interactions by analyzing constituent chemical salts across a database of 100+ medications.
- Built a modern, responsive UI using **Tailwind CSS** featuring an **interactive accordion system** for component breakdown and real-time **autocomplete search**.
- Optimized for production with **Gunicorn** and a **Procfile**, maintaining clean version control via **Git/GitHub**.
- **Tools Used:** Python, Django, JavaScript, Tailwind CSS, Gunicorn, Git

### Hasthakshar using Deep Learning

[Link](#)

Computer vision system to recognize and translate Indian Sign Language gestures

- Creating a **custom dataset** of **Indian Sign Language gestures** for training the detection model.
- Implementing **stick figure representation** for **skeletal keypoint detection** and analysis.
- Utilizing **deep learning frameworks** (TensorFlow/PyTorch) for **real-time gesture recognition** achieving **90% accuracy**.
- **Tools Used:** Python, TensorFlow/PyTorch, OpenCV, MediaPipe, NumPy, Matplotlib

## Achievements

- Microsoft Office Specialist: PowerPoint 2013 (By Microsoft) – May 2019 [Badge - [Link](#)]

## Extracurriculars

- President & Founder, Eureka Club - VIT Bhopal
- Volunteer in AI Conclave 2.0 in AI Club - VIT Bhopal