

YASH KHATI

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Education

Graphic Era Deemed to be University

Bachelor of Technology in Computer Science – CGPA: 8.72/10.0

August 2022 - Present

Dehradun, India

Don Bosco School (CBSE)

12th Grade – 93.80%

April 2021 - May 2022

Pithoragarh, India

Don Bosco School (CBSE)

10th Grade – 93.20%

April 2019 - May 2020

Pithoragarh, India

Projects

Handwritten Digit Recognition | [Python](#), [Keras](#), [TensorFlow](#), [Streamlit](#), [NumPy](#), [PIL](#), [CNN](#)

2024

- Built and trained a **Convolutional Neural Network (CNN)** using **TensorFlow/Keras**, achieving **97% accuracy** on the **MNIST dataset (70K samples)**.
- Developed a web application with **Streamlit**, supporting dual input via **streamlit-drawable-canvas** for sketching or uploading digit images.
- Optimized preprocessing and inference for fast, real-time digit recognition.

Sentiment Analyzer | [Python](#), [Scikit-learn](#), [NLTK](#), [Streamlit](#), [Google API](#)

2025

- Built a sentiment classification system on the **IMDB 50K Reviews dataset**, including preprocessing, model training, and deployment.
- Implemented a preprocessing pipeline with **NLTK** (tokenization, lemmatization, text cleaning) and extracted **5K TF-IDF features** for sentiment classification.
- Trained an **SVM classifier** achieving **87.9% accuracy** and an **F1-score of 0.88**.
- Extended functionality with **YouTube Data API v3** to analyze **10K+ live comments** for real-time insights.
- Developed an interactive **Streamlit dashboard** for dynamic sentiment visualization with **sub-second response time**.

Sign Language Recognition System | [Python](#), [TensorFlow](#), [Keras](#), [MediaPipe](#), [OpenCV](#)

2025

- Built an end-to-end ASL alphabet recognition system covering the full pipeline - **data collection**, **model training**, and **real-time testing**.
- Collected a custom dataset (30 sequences × 30 frames each per class) using **MediaPipe Hands** for 3D hand landmark extraction.
- Trained a stacked **LSTM model** with TensorFlow/Keras on ASL alphabet signs, achieving **89% accuracy**.
- Implemented a **real-time gesture recognition system** using **OpenCV** and **MediaPipe**, with optimizations such as frame skipping, confidence thresholds, and smoothing for stable predictions.

Technical Skills

- **Languages** C++, Python, C
- **Tools** Git, GitHub, VS Code
- **Database** MySQL

Achievements and Accomplishments

- Qualified for **Stage 2 of ATF 2024**, ranking among the top 4,000 students in India.
- Selected from 2500+ students across IITs and NITs for the **GraphTheory Programming Camp (Apr 2024)** conducted by Codeforces Master **Manas Kumar Verma**.
- Contributed as part of the organizing team for the **2024 President's Cup of Cricket**, the university's largest tournament.
- Served as a **Volunteering Member** at the **G20 Symposium on Digital Agriculture** (Aug 2023), assisting in event coordination at Graphic Era Deemed to be University.