#### **Aryan Sharma**

- Pangalore, India
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#### **S** Education

## M.Tech in Artificial Intelligence

Indian Institute of Technology (IIT) Bombay 2023 – Present

- GPA: 9.1/10
- Relevant Courses: Deep Learning, Signal Processing, Multimodal AI, Computer Vision, Advanced NLP

#### **B.Tech in Computer Science**

NIT Trichy 2019 – 2023

• CGPA: 8.9/10

# Technical Skills

- Programming Languages: Python, C++, C
- Frameworks/Libraries: PyTorch, Scikit-learn, TensorFlow, OpenCV, Scikit-image, HuggingFace
- Tools: Git, Linux, MATLAB, Jupyter, Docker
- ML Areas: Multimodal AI, Deep Learning, Speech/Text/Image Processing, Transformer Models
- Mathematics: Probability, Linear Algebra, Optimization, Statistical Modeling

# Projects

#### 1. Multimodal Sentiment Analyzer (NLP + Vision + Audio)

- Built a multimodal model using PyTorch to classify sentiment using synchronized text, facial expressions, and tone of voice
- Dataset: CMU-MOSEI
- Achieved F1-score of **84.2%** using transformer fusion model

## 2. Medical Imaging Classifier using Vision Transformers

 Built a system using Scikit-Image and PyTorch to classify retinal scans for diabetic retinopathy detection • Applied data augmentation, fine-tuning and model interpretability methods

## 3. Voice-Driven Assistant with NLP and Signal Analysis

- Developed a speech-to-intent model using wav2vec2 + fine-tuned BERT
- Used PyTorch and HuggingFace Transformers

#### Achievements

- Top 3% in Kaggle Multimodal Challenge 2024
- Published paper in IEEE International Conference on Multimedia and Expo (ICME) 2024:
  "Fusion of Speech and Visual Embeddings for Emotion Recognition"
- Cleared GATE 2023 with AIR 67 in CS

# Research Interests

- Multimodal Deep Learning
- Cross-modal Alignment and Representation Learning
- Audio-visual and Textual Signal Fusion
- Low-resource Model Optimization

## **\*** Experience

Al Research Intern – TCS Research (Remote)

Jan 2024 – May 2024

- Developed audio-visual speaker verification system using attention-based CNN-RNN models
- Benchmarked performance with baseline systems using PyTorch

#### Soft Skills

- Excellent collaboration and written communication
- Agile learner, eager to work with diverse teams
- Strong documentation and presentation skills

# Declaration

I hereby declare that the above information is true to the best of my knowledge.