# Harish KB

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HARISH20205

#### EDUCATION

## Vellore Institute of Technology (VIT)

Vellore, India

MTECH (Integrated) in Computer Science and Engineering (CGPA: 8.46)

Aug 2022- July 2027

### EXPERIENCE

## AI Research and Development Intern (Remote)

Jun 2024 – Oct 2024

eBramha Techworks Private Limited

- Developed a speech-to-text summarization system integrating Whisper for transcription and Pegasus for summarization, enhancing processing speed and efficiency while significantly reducing overall processing time and improving system performance.
- Conducted in-depth research on advanced NLP models such as PEGASUS, BERTsum and BART, contributing to the development of effective solutions for tasks like summarization and language understanding.
- Built a neural network for handwritten digit classification (MNIST) from scratch, implementing core machine learning concepts like gradient descent and one-hot encoding.

### Projects

## VerbiSense: Interactive Document Retrieval System - Link

- Built the VerbiSense backend with FastAPI, optimizing document uploads, query processing, and API performance for real-time interactions with the React frontend.
- Integrated Retrieval-Augmented Generation (RAG) for improved document retrieval and response generation.
- Applied PyTorch models for advanced NLP tasks like semantic understanding and context-based querying.

#### Speech-to-Text Summarization

- Developed a Python script that improved audio transcription accuracy by 30% and reduced post-processing time by 35%.
- Designed and implemented the frontend interface to provide a seamless, user-friendly experience for individuals interacting with the speech-to-text summarization system.

#### TECHNICAL SKILLS

**Languages:** Python, Java, C/C++

Machine Learning: Supervised learning, unsupervised learning, NLP, LLMs

Tools: GitHub, Docker, Linux, AWS, Hugging Face

Computer Vision: OpenCV, YOLO

Backend: FastAPI, Flask, MongoDB, Firebase

## Areas of Interest

- Machine Learning and AI
- Full Stack Development
- Cloud Computing and DevOps Practices

#### CERTIFICATIONS

- Coursera: Supervised Machine Learning: Regression and Classification
- Coursera: Advanced Learning Algorithms
- Coursera: Generative AI with Large Language Models