S Karthik

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Summary

B.Tech CSE student (CGPA: **9.58/10**) at SRM IST with strong expertise in AI, ML, Deep Learning, and Full-Stack Development. Proficient in Python, React, Node.js, PyTorch, and Scikit-learn. Experienced in building end-to-end intelligent systems, multimodal AI models, and production-ready web applications. Pursuing Diploma in Data Science from IIT Madras.

Education

SRM Institute of Science and Technology – Ramapuram **2022 – 2026**
*B.Tech, Computer Science and Engineering | CGPA: **9.58 / 10***

Indian Institute of Technology, Madras **Jun 2022 – Present**
Diploma in Data Science (BSc Programme) | Foundation Level Certified

Amrita Vidyalayam, Chennai – CBSE **2020 – 2022**
Class XII (MPCC) | 79% Class X | 93%

Technical Skills

Languages: Python, Java, JavaScript, HTML, CSS
Frameworks & Libraries: React.js, Node.js, Tailwind CSS, PyTorch, TensorFlow, OpenCV, Pandas, NumPy, Scikit-learn, Librosa
AI/ML: CNNs, Transformers, YOLO, NLP, Generative AI, Prompt Engineering, RAG, Multimodal Learning
Databases: MySQL, MongoDB, Prisma ORM | **Tools**: Git, Jupyter, Google Colab, Figma, GCP, Streamlit

Projects

Patient Management System | React, Node.js, Prisma, MySQL | GitHub **Feb 2025 – Mar 2025**
- Developed full-stack patient management web app with user registration, medical records, and appointment scheduling.
- Implemented patient verification workflows and doctor/time-slot self-selection system, improving scheduling efficiency.

Multimodal Sentiment & Emotion Analysis | Python, PyTorch, OpenCV, Librosa, Transformers **Dec 2024 – Jan 2025**
- Built multimodal deep learning system fusing video, audio, and text streams to detect real-time sentiments and emotions.
- Engineered hybrid CNN + Transformer architecture with OpenCV for video frames and Librosa for audio features.

Accessibility System via Object Detection | Python, YOLO, PyTorch, TensorFlow **Nov 2024**
- Developed real-time accessibility tool for disabled individuals using YOLO with speech-to-text and text-to-speech pipelines.
- Project selected for IBM Z Datathon (Oct 2024) in collaboration with Shooting Stars Foundation.

Publications

Human Action and Face Recognition Using Python | MediaPipe, ML **Jun 2025**
- Published research on real-time action and face recognition system using MediaPipe and ML for live human identification.

Certifications

Quantum Computing | C-DAC & IIT Roorkee **Jun 2025**
IBM PALS — Generative AI | IBM **Apr 2025**
Geodata Processing Using Python and Machine Learning | IIRS & ISRO **Mar 2025**
IIT Madras BS Data Science — Foundation Level | IIT Madras **Sep 2024**

Conferences & Workshops

Hands-On Dynamic Programming | IIT Madras – Online **Jan 2025**
Introduction to Cloud Using GCP | IIT Madras – Online **May 2025**

Competitions

IBM Z Datathon | Shooting Stars Foundation **Oct 2024**
- Developed and presented real-time YOLO-based object detection system with voice assistance for disabled individuals.

Volunteering

Youth Organization | Environmental Conservation Initiative **Jul 2024**
- Planted 30+ saplings near Mangal Eri Lake, Chennai as part of "Green Roots" environmental campaign.

Wockhardt Foundation & BPCL | Beach Cleanup Drive **Jul 2024**
- Collected 8 kg of plastic waste at Elliot's Beach, Chennai, contributing to environmental hygiene campaign.