

# Trisha Vijayekkumaran

A committed student studying **B.Tech in Computer Science Engineering from Amrita Vishwa Vidyapeetham** and **B.S in Data Science from IIT Madras**, with a mix of software development, data science, and artificial intelligence skills. Using knowledge effectively in real-world projects and hackathons, with hands-on experience in critical thinking, problem-solving, and data analysis. Motivated by the desire to create innovative products that utilize technical and analytical acumen to solve intricate problems, keen on implementing interdisciplinary skills in order to create meaningful contributions within dynamic settings.

## PROFESSIONAL EXPERIENCE

### AI/ML Intern

Gabify

October 2024 - December 2024

- Worked on **fine tuning LLMs** and deep learning models for **detecting speech impediments**.
- Trained Computer Vision model on **detecting emotions and stress** during speech impediment detection.

## PROJECTS

### Object Detection and Classification in Airport X-Rays

January 2025 - Present

- Creating new computer vision models for object detection in X-Rays
- Fine-tuning existing and recent **YOLO models** for object detection in X-Rays.

### Ziroh Labs Project

February 2024 - Present

- Creating a Java implementation of **VGGNet** using Java
- No use of inbuilt packages for the implementation

### Agentic Workflow Implementation Using LangGraph

September 2024

- Developed a multi-agent workflow using Langgraph, enabling efficient **query decomposition and resolution**
- Optimized query processing with iterative refinement, enhancing response accuracy through **feedback integration**.

### Multimodal Retrieval-Augmented Generation (RAG) system

September 2024

- Integrated **CLIP, BLIP, and T5 models** for text and image-based question answering and summarization
- Implemented an **automated pipeline** for document understanding, enabling PDF text/image extraction, reasoning, and feedback-based response optimization without OCR

## SKILLS

- |                               |                       |
|-------------------------------|-----------------------|
| • Python, Java, C++, C        | • Problem Solving     |
| • MySQL, MongoDB              | • Leadership          |
| • HTML & CSS & JavaScript     | • Critical Thinking   |
| • Scrum & Agile Methodologies | • Adaptability        |
| • Flask, Django               | • Public Speaking     |
| • Tableau                     | • Teamwork            |
| • Computer Vision, NLP        | • Conflict resolution |
| • AutoCAD, Blender, Unity     | • Empathy             |

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## EDUCATION

### Bachelor of Technology in Computer Science Engineering

Amrita Vishwa Vidyapeetham

Benagluru

2022 - 2026 **CGPA - 8.36**

### Bachelor of Science in Data Science

Indian Institute of Technology Madras

2023 - 2027 **CGPA - 8.25**

## PUBLICATIONS

### Multi Language Lexical Analyser

5th GCAT Conference 2024, Bangalore

### Efficient Parking Allotment System

ICTCS SPRINGER 2024, Jaipur

### Efficient Parking Spot Allocation in a Grid-based Parking Lot

Comp-SIF 2025, Bangalore

### Explainable AI-based Detection and Interpretation of Abnormalities in Chest X-rays

ISACC 2025, Silchar

## CERTIFICATION COURSES

IBM Machine learning Certification

Aug 2024 - Present

Microsoft AI Skills Certification

Feb 2024

## ACHEIVEMENTS

Algomania'23

**1st Place**

Margazhi OSC'24

**5th Place**

HACK4CHANGE'24

**Top 10 Finalist**