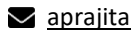


# APRAJITA

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## Education

### Vellore Institute of Technology, Bhopal

B.Tech – Computer Science & Engineering

### Vidya Bharati Chinmaya Vidyalaya

12th - CBSE Board

### Hill Top School

10th - ICSE Board

2022 - 2026

CGPA - 7.94

2022

Percentage – 77.6%

2020

Percentage – 94.8%

## Work Experience

### Tata Motors Limited

Dec'24 – Jan'25

Machine Learning Intern

Jamshedpur

- Developed a deep learning model using TensorFlow/Keras to predict used car prices based on features like age, mileage, fuel type, and power.
- Deployed the model with a Flask API and integrated it into a front-end form for real-time predictions via JavaScript.
- Preprocessed structured data, engineered relevant features, and optimized model performance through evaluation and tuning.
- Built a responsive HTML interface to collect user input and display predicted prices dynamically.

## Projects

### Recipe Search Website

- Developed a responsive web application enabling users to search and filter recipes based on ingredients, cuisine, and dietary preferences using HTML, CSS, and JavaScript.
- Integrated user interaction features such as ratings, reviews, and bookmarking, improving engagement and return visits.
- Implemented responsive design principles for seamless multi-device functionality across mobile and desktop platforms.
- Optimized front-end performance with efficient DOM manipulation and lightweight styling for faster page loads.

### Breast Cancer Classification

- Built a supervised machine learning pipeline using scikit-learn for early-stage breast cancer detection using structured diagnostic data.
- Engineered features and applied normalization techniques to enhance model accuracy and reduce bias in classification.
- Integrated explainable AI (XAI) techniques such as SHAP values for transparency in decision-making and trust in model outputs.
- Designed the system with clinical usability in mind, supporting timely and reliable diagnostic assistance for healthcare professionals.

### Sign Language Detection using LSTM

- Designed and trained an LSTM-based neural network for real-time sign language gesture recognition using sequential video frame data.
- Implemented a complete data pipeline using OpenCV and MediaPipe for keypoint extraction, frame normalization, and preprocessing.
- Optimized model accuracy through hyperparameter tuning and experimentation with stacked LSTM architectures.
- Aimed for deployment in assistive communication systems to support hearing and speech-impaired users through real-time gesture-to-text translation.

## Skills Summary

**Technical Skills:** Python, Java, HTML, CSS, JavaScript, SQL

**Skills:** Web Development (HTML, CSS, JavaScript), Front-End Optimization, Machine Learning, Supervised Learning, Feature Engineering, Data Normalization, Deep Learning, LSTM, Computer Vision, OpenCV, MediaPipe, Hyperparameter Tuning, Model Optimization, Assistive Technology, Sequential Data Processing, Gesture Recognition, Data Preprocessing

**Language:** English (Full Proficiency), Hindi (Native)

**Certifications:** Fundamentals of Digital Marketing (March'23), Python by Kaggle (April'23), HTML, CSS and JavaScript for Web Developers – (November'23), Java Spring Framework 6 with Spring Boot 3 course on Udemy (November'24), Gen AI by IBM (April'25), Full Stack Developer MERN by SmartBridge (April'25)

## Achievements

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- Cleared the college round of Smart India Hackathon in 2024
- Listed amongst the top 300 teams at the National Level and top 10 at State level in ATL Marathon 2020

## Position of Responsibility

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### -Data Science Club,VIT Bhopal

Core Member,HR team

- Spearheaded recruitment processes, resulting in a 30% increase in club membership within the first semester.
- Implemented data-driven strategies for team collaboration, leading to a 20% improvement in project completion rates.

### - English Literary Association,VIT Bhopal

Core Member,PR and Marketing

- Collaborating on the development of upcoming promotional campaigns to increase visibility.
- Aiming to boost social media engagement by 20% within the next quarter through targeted content strategies.

Core Member,Technical and Finance Wing

- Financial Management: Managed and allocated budgets for various events and activities, ensuring optimal use of resources while maintaining financial records accurately.
- Data Collection: Created and utilized Google Forms to gather and analyze data for event planning, participant feedback, and financial reporting.

### - Blockchain Club,VIT Bhopal

Core Member,Event Management

- Collaborating with the Event Management team to plan and execute engaging events.
- Currently working on streamlining communication channels to enhance team efficiency, aiming for a 20% reduction in planning time by the end of the semester.

-Volunteered at the inaugural ceremony of Blockchain Club at VIT Bhopal

-Was a Council Member in High School (Vice-Captain and Coordinator of my house in std. 8th and std. 9th respectively)