

# RAJAPANDI B

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## EDUCATION

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| <b>Sethu Institute of Technology</b><br><i>Bachelor of Technology - computer science and business systems; GPA: 7.27</i><br><i>Courses: Computer Vision, Artificial Intelligence, machine learning, deep learning, Edge Computing, Data Structures &amp; Algorithms</i> | Tamil Nadu, India<br>July 2022 - June 2026 |
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## SKILLS SUMMARY

- Languages:** C, C++, Python (for AI/ML, data analysis, and computer vision)
- Frameworks:** OpenCV, TensorFlow, Keras, Scikit-learn, NLTK,
- Tools:** GIT, MySQL, SQLite
- Platforms:** Web, Windows, Arduino, Raspberry,
- Soft Skills:** Leadership, Event Management, Problem Solving, Critical Thinking, Time Management

## EXPERIENCE

- NoviTech R&D Private Limited — Remote**  
*Intern - Artificial Intelligence | June 2024 – July 2024*  
*Developed object detection models, enhancing visual data analysis.*  
Improved object detection model accuracy by **15%** through effective data preprocessing and augmentation  
Engineered real-time machine learning algorithms for object detection, collaborating closely with team members to ensure seamless implementation.
- Cognifyz Technology — Remote**
  - Intern - Machine Learning | July 2024 – August 2024*
  - Engineered machine learning models for predictive analytics and data classification, improving accuracy by **12%**.
  - Conducted feature engineering and model evaluation, reducing error rates by **10%**.
  - Collaborated on data-driven projects to enhance decision-making, integrating advanced analytics into business strategies.

## PROJECTS

- Advanced Edge AI Navigation and Assistance System for Blind**  
Developed a computer vision-based navigation system to empower visually impaired users with real-time object detection, person recognition, and environmental awareness. The system reads and speaks written notices, enabling safe and independent navigation.  
**Tech:** Python, OpenCV, TensorFlow, Raspberry Pi
- Real-Time Gesture Recognition System**  
Designed and implemented a real-time gesture recognition system using deep learning models to identify hand gestures, enhancing interaction for assistive technology applications. The system features a lightweight architecture for efficient processing on edge devices.  
**Tech:** Python, TensorFlow, OpenCV, Keras
- Automated Book Reader for the Visually Impaired**  
Created a system using computer vision to detect text in books and read it aloud, providing an accessible solution for visually impaired users. Utilized OCR and text-to-speech technologies for seamless interaction.  
**Tech:** Python, OpenCV, Tesseract OCR, gTTS
- Automated Vision Systems for Tracking and Mapping Urban Wildlife Activity**  
Designed a system to detect and monitor urban wildlife using computer vision techniques, facilitating data collection and analysis of animal behavior and movement patterns.  
**Tech:** Python, TensorFlow, OpenCV, Raspberry Pi

## PUBLICATIONS

- Advanced Edge AI Navigation and Assistance System for Blind Users**  
Published in *International Journal for Multidisciplinary Research (IJFMR)*, Volume 6, Issue 5 (September-October 2024).  
This paper presents an innovative AI-powered navigation system designed for visually impaired users. It integrates real-time object detection, person recognition, text reading, and traffic signal response, all while operating efficiently on low-power mobile platforms.

## HONORS AND AWARDS

- First Place – Winning Paper Presentation**, K.S.R College of Engineering, 2022
- Honours Diploma in Computer Application (HDCA)

## VOLUNTEER EXPERIENCE

- Sethu Institute of Technology, CSBS Department**  
Lead Organizer | March 2024  
Led the planning and execution of the departmental symposium, coordinating events and managing logistics effectively.
- Organizer, College Hostel Day — Sethu Institute of Technology**  
**October 2023**  
Successfully coordinated the planning and execution of the college hostel day, managing logistics and organizing activities, fostering a sense of community among students and faculty.