RAJAPANDI B
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EDUCATION

Sethu Institute of Technology **July 2022 - March 2026**

Bachelor of Technology - computer science and business systems **GPA: 7.27**

- **Courses:** computer science with business management, Artificial Intelligence, machine learning, deep learning, Data Structures & Algorithms, technology management alongside Business principles like finance and marketing

SKILLS SUMMARY

- **Languages**: C, java, Python (for AI/ML, generative ai, data analysis, and computer vision)
- **Frameworks**: OpenCV, TensorFlow, Keras, Scikit-learn, NLTK,
- **Generative AI & AI Agents:** LLaMA, Stable Diffusion, GPT-based models, RAG Systems, AI Agents for specialized domains
- **Tools**: GIT, MySQL, SQLite
- **Platforms**: Web, Windows, Arduino, Raspberry,
- **SoftSkills**: Leadership, Event Management, Problem Solving, Critical Thinking, Time Management

EXPERIENCE

TACSS – Remote

Intern - AI Developer (January 2025 – Present)

- Working on AI-driven applications and solutions in the technology department.
- Developing and optimizing machine learning models for various use cases.
- Collaborating with teams to enhance AI systems for better performance and efficiency.

NoviTech R&D Private Limited – Remote
Intern - Artificial Intelligence (June 2024 – July 2024)

- Developed object detection models and processed images to enhance visual data analysis.
- Improved model accuracy through effective data preprocessing and augmentation.
- Collaborated with the team to implement real-time machine learning algorithms for object detection

Cognifyz Technology – Remote
Intern - Machine Learning (July 2024 – August 2024)

- Assisted in developing machine learning models for predictive analytics and data classification.
- Engaged in feature engineering and model evaluation to optimize performance.
- Collaborated with team members on data-driven projects, enhancing decision-making processes.

PROJECTS

Retrieval-Augmented Generation (RAG) for Document Processing

Designed an AI-powered RAG system that processes documents, websites, and Excel sheets to provide accurate answers to queries. This system improves information retrieval efficiency in legal, business, and academic domains. **Tech:** Python, LangChain, OpenAI API, Web Scraping

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

Generative AI-Based Image and Text Synthesis

Developing AI models for generating high-quality images and realistic text using advanced generative AI techniques. The project explores applications in content creation, data augmentation, and creative AI.

Tech: Python, Stable Diffusion, LLaMA, GPT-based models

AI Agents for Specialized Domains

Developed AI agents for various specialized domains. The AI Coding Agent provides precise coding solutions for programming-related queries, while the Jurish Agent answers law-related questions based on case precedents and legal documents. The Agriculture AI Agent offers insights into farming techniques, soil conditions, and agricultural best practices. Additionally, efforts are continuously made to expand AI agents into various industries, enhancing automation and decision-making capabilities.

Tech: Python, LangChain, OpenAI API, Web Scraping, Natural Language Processing (NLP), Machine Learning, Legal Data Analysis, Large Language Models (LLMs)

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 Tiruchengode, 637 215, Namakkal (D.t), Tamilnadu, India
- Honours Diploma in Computer Application (HDCA) Completed

VOLUNTEER EXPERIENCE

Sethu Institute of Technology, CSBS Department (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. Engaged students and faculty, fostering a sense of community and collaboration among hostel residents.