# Karthik Rajan S

Bangalore, Karnataka | +9195002 45257 | @portfolio | @linkedin | @github | @leetcode | @medium |karthikrajan025@gmail.com

## EDUCATION

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| Easwari Engineering College | Aug'21 - Mar'25, Chennai, India |

Bachelor of Engineering - Computer Engineering; CGPA: 8.6

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| Alwin Memorial Public School | Jun'19 - May'21, Chennai, India |

*12th Grade (HSC); Percentage: 95% & 10th Grade (SSC); Percentage: 91%*

## SKILLS

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| Languages | : Python, JavaScript, Typescript, HTML, CSS, Java |
| Frameworks | : React Native, ReactJS, Streamlit, TensorFlow, Pandas, NumPy, Scikit-learn,, FastAPI, Flask, LangChain, LangGraph, CNN, GenAI, RAG, MCP (Model Context Protocol) |
| Tools | : Git, Firebase, MySQL, PostgreSQL, PowerBI, VectorDB, Docker, AWS, Azure, Langfuse, Hugging Face |
| Soft Skills | : Problem solving, Leadership, Time management, Decision Making, Communication, Adaptability |

## EXPERIENCE

**AI Intern @Sarvam.ai**  <div align="right">**Bangalore, Jul'25**</div>
◦ Working as AI Intern, Developing voice agents and integrated them with WhatsApp for seamless conversational experiences & task automation

**AI Intern @Vahan.ai**  <div align="right">**Bangalore, May-June'25**</div>
◦ Worked as AI Intern, Developing ASR systems & voice bot agents using open-ai models. Working on speech-to-text, text-to-speech, and real-time voice interaction pipeline

**SDE Intern @ Ninjacart**  <div align="right">**Bangalore, Apr'25**</div>
◦ Worked as SDE Intern, Building AI Agents to Automate workflows across Agri tech and Fintech Domains

**Data Science Intern @Signa Tech Services Pvt Ltd**  <div align="right">**Chennai, Sep'24-Feb'25**</div>
◦ As a Data Scientist & Product Development Intern, contributing to working with the LLM applications & developing a standalone web application that leverages OpenAI models

**Data Science Intern @National University of Singapore (NUS) And Amazon (AWS)**  <div align="right">**Singapore, Jul'23-Aug'23**</div>
◦ Successfully completed Global Academic Internship Programme (GAIP) by Corporate Gurukul in collaboration with National University of Singapore (NUS), earning "A*"* grade, with a project score of 43.75/50. Completed Training and Certification from AWS.

## CERTIFICATION

- **Microsoft Certified Azure AI Engineer Associate (AI-102)** – Microsoft, 2025
- **AWS Certified AI Practitioner (AIF-C01)** – AWS, 2024
- **Microsoft Certified Azure AI Fundamentals (AI-900)** – Microsoft, 2025
- **Data Analytics using Deep Learning** – National University of Singapore, 2023
- **AWS Certified Data Analytics using BIG Data**- AWS, 2023
- **Web Development Training** - Mood Indigo, IIT Bombay + Acmegrade, Aug-Sep'23
- **Privacy & Security in Online Social Media** - NPTEL Course, July-Oct'23
- **Data Analytics with Python** - NPTEL Course, Jan-Apr'23
- **Frontend for Java Full Stack Development** - Board Infinity, Coursera
- **Career Essentials in Data Analysis** - Microsoft and LinkedIn

## PROJECTS

- **CrediFlow Agent – AI Automation for Financial Ops | LangGraph, FastAPI, LangChain, MCP, Redis, PostgreSQL, Docker |** Built a modular multi-agent system using LLMs to automate financial workflows with real-time streaming, contextual memory, and event-driven execution.
- **DineEase – AI-Powered Restaurant Reservation System | LangChain, OpenAI, Ollama, FastAPI, React.js, MCP, Langfuse, Docker –** Built an intelligent reservation system with LLaMA3.2, enabling a conversational agent to manage bookings and table reservations based on user preferences.
- **Crop Recommendation System with Plant Disease Detection** |Python, Streamlit, AI/ML, Neural Networks (ResNet50)- This model predicts suitable crop & disease of the plant grown, that can be identified WRT given input features.
- **Parkezy – A generic streamlined Intellectual Parking System using ALPR / RFID |** Android studio, ALPR-API, Fire base, Java, RFID, Google Maps API - This tool is comprehensive intellectual parking management & control system offering a user-friendly experience to both parking carriage & consumer.
- **Deanonymization of illegal crypto transaction** | Bitcoin Core, Python, React, Wireshark - Developed a tool employing machine learning algorithms to classify transactions & wallets, analysing publicly available transaction information to form a Transaction Network Graph and identifying their IP.
- **AI Voice Assistant Chatbot** | OpenAI, LLAMA, ChromaDB, LangChain, Streamlit, ChatTTS -Developed a real-time voice assistant using Whisper for speech-to-text and ChatTTS for text-to-speech, enabling seamless interaction and conversation summarization.
- **KarryBot – A Grammar Checker AI Assistant |** ReactJs, Python, Hugging Face Models, WebSockets, FastAPI – This is a grammar & spell-checking tool that provides real time suggestions and corrections to enhance writing accuracy.

## ACHIEVEMENT

- **Winner of Smart India Hackathon, 2023,** Amity University, Noida during Dec'23 which was organised by Ministry of Education
- Presented a paper in 7th World Conference on "Smart Trends in System, Security & Sustainability", Aug'23 (**accepted for springer LNNS series in scopus indexed journal**)
- Published a patent titled 'ALZCARE: Personalized Voice Assistant for Alzheimer Patients' (Application No. 202441089436, Publication Date: 29/11/2024), leveraging deep learning and Azure IoT for advanced neurodegenerative care solutions.
- Published a patent titled 'EDGE-AI Powered Pothole Detection System & Method for Real-Time Road Safety Enhancement' (Co-Inventor, Application No.202541010838 A, dated: 14/02/2025), integrating deep learning models like YOLO with edge computing.