Karthik Manikandan

https://github.com/Karthikxp . https://www.linkedin.com/in/karthik-manikandan-6a111825b/

+91 6379529680 . karthik.manikandanmk@gmail.com

ABOUT ME

A detail-oriented and adaptable individual with a strong passion for full-stack development, cloud computing, and cybersecurity. Continuously learning and experimenting with front-end technologies, automation, and modern tech solutions through personal projects and hackathons. Skilled at translating complex ideas into user-friendly applications while leveraging cloud infrastructure for efficiency. A proactive communicator with proven leadership experience, fostering teamwork and creative thinking. Currently seeking an internship to expand technical expertise and bring fresh, innovative approaches to real-world challenges.

EXPERIENCE

. Front End development Pichandi Kulam Foundation IIT Madras   **2024 APRIL**

Provided front end development support to create a dashboard for Pichandi Kulam forest foundation 2024.

. UI/UX Designer   **2020-2022**
Provided UI/UX design on dashboard and apps ; fiverr

PROJECTS .

APTS - Ambulance Prioritised Traffic System using ML and AI Identification (2024)

Created a smart traffic route management System that detects and uses optimal path to provide a ambulance in emergency state route to nearest hospital using microcontrollers and data processing using ml models

C-Sar - Denoising and Colorizing SAR Images Using CNN models (SIH)

Developed a web application that integrates machine learning model for colorizing SAR images.Reduced load time by optimizing backend processes, enhancing user experience significantly. Technologies used: NextJs, Tailwind CSS, Python, TensorFlow, Flask.

SIDEMEN Securities (2025)

Designed and implemented a smart network security solution that sits between IoT devices and the internet, ensuring secure communication and authentication using PKI and AES encryption. Integrated a Next.js-based dashboard for real-time device monitoring, anomaly detection, and remote isolation. Developed a Windows-based proxy server to analyze traffic, detect malicious activity, and enforce DNS poisoning for unauthorized devices until admin approval. Technologies used: Next.js, Flask, Python, RSA, AES-256, and ESP8266.

VisionAid – AI-Powered Assistive Dashboard for the Visually Impaired (2025)

Developed a Flutter-based smart dashboard that assists visually impaired individuals by integrating AI-powered object, text, and face recognition. Implemented real-time camera feed processing via Raspberry Pi/Arduino and OpenAI Vision for accurate identification of books, objects, and currency. Designed a haptic feedback system for intuitive interaction and accessibility. Ensured seamless UI/UX with a Next.js-powered admin dashboard for customization and updates. Technologies used: Flutter, React Native, OpenAI Vision, Raspberry Pi, Arduino, and TensorFlow.

SKILLS

C#,C, Java, Python, PL/SQL, JavaScript, HTML5, CSS3,SQL,Web API, Flask, React, Next.js, React Native, Flutter,AWS,Internet of Things, Cloud Computing,Network Security, Network Monitoring, Vulnerability Analysis

EDUCATION

2022 - 2026

B.E Computer Science and Engineering

Sri Venkateswara College of Engineering (SVCE)

Relevant coursework in CS Fundamentals and Mathematics