

KAARTHIKEYAN AV

MSC DECISION AND COMPUTING SCIENCES (INTEGRATED)

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Professional Experience

Prediscan Med Tech, Fullstack Developer Intern

- Developed and deployed a chronic disease detection platform using Streamlit, improving diagnostic accessibility for over 200+ test cases, with a 30% reduction in user interaction time during clinical trials.
- Engineered a diabetic retinopathy detection platform using both Flask and Django, enabling flexible deployment modes and supporting over 95% model inference accuracy across various preprocessed inputs.
- Refactored and optimized an existing project architecture, resulting in a 40% improvement in model response time and a 25% boost in UI responsiveness, enhancing real-time usability for healthcare professionals.

Projects

Power Exchange Simulation

- Designed and implemented a peer-to-peer energy trading simulator supporting over 1,000 simulated households, enabling surplus energy exchange with up to 85% local trade utilization, reducing grid dependency.
- Integrated advanced algorithmic techniques: Merge Sort for agent ranking ($O(n \log n)$), Greedy Two-Pointer Matching ($O(n)$) for optimal pairings, and Dynamic Programming ($O(nT)$) for multi-round benefit allocation.
- Applied Midpoint Pricing to facilitate over 500 fair and conflict-free trades per simulation, and ensured participant privacy using SHA-256 hashing, enabling constant-time ledger lookups and anonymized indexing.
- Delivered a scalable, low-latency system capable of processing real-time energy exchanges within <100ms per round, aligning with smart grid operational demands.

GitHub Link: [Click Here](#) 🔗

Bus Tracking System - MERN Full Stack

- Engineered a dynamic bus tracking system leveraging the MERN (MongoDB, Express, React, Node) stack, revolutionizing route monitoring and accessibility in urban transportation.
- Revolutionized urban mobility by furnishing real-time route data and transparent fare details.
- Orchestrated the deployment of a user-friendly interface on a Netlify server via Render, ensuring effortless access and navigation for all users, regardless of their technological proficiency.

Github Link: [Click Here](#) 🔗

Image Editor

- Built with Python's Kivy framework, this application empowers users to effortlessly manipulate images through a user-friendly interface.
- Crop unwanted areas, resize images to specific dimensions, and apply artistic filters, all within an average session duration of 10 minutes, highlighting its efficiency.
- Unleash your creativity and transform your images into captivating visuals.

Github Link: [Click Here](#) 🔗

Education

Msc Decision & Computing Sciences

CGPA: 7.38/10 (Until 7th SEM) | Coimbatore Institute of Technology | Coimbatore | 2021-2026

Skills

Technical Skills

Languages & Frameworks: Python, React, Django, Streamlit, Power BI, Excel, Flask | **Databases:** MySQL, Oracle, Mongo DB |

Web Development: HTML, CSS, JavaScript

Areas of Interest

Web Development | Data Science and Analytics | Cloud Computing | App Development

Experience

Event Coordinator at 403 Strats Club

Overseen technology events, supervised gaming stations, and conducted technical assessment rounds.

Office Bearer & Editor at Women Empowerment Cell

Conceived and orchestrated awareness-building events, coordinated and facilitated self-defense classes specifically designed for women, and assumed the role of editor for a wide range of media materials, encompassing posters, videos, and reels.