

Vinoth Kumar Thoppae Sethu Raman

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Education

Thiagarajar College Of Engineering

Bachelor of Technology - Information Technology; CGPA: 7.28 / 10.0 (upto 5th Semester)

July 2022 – Present

Madurai, Tamil Nadu

Technical Skills

Programming and Database: Python, Java, HTML, CSS, SQL

Tools and Frameworks: Computer Vision, TensorFlow, Pandas, Keras

Domain: Artificial Intelligence (AI), Machine Learning (ML), Deep Learning (DL), Web Development

Operating Systems: Windows, Linux, MacOS

Projects

Driver's Buddy – Drowsiness Detection and Emotion-Based Food Recommendation System

OpenCV, MediaPipe, NumPy, Gemini

- Built a real-time monitoring system to detect driver drowsiness and facial emotions using EAR/MAR metrics and fine-tuned MobileNetV2 (81% accuracy).
- Implemented Google GenAI with LangChain for dynamic food suggestions based on emotional state and location with voice alerts. [\[View\]](#)

AI-Powered Recommendation System

Python, Google Generative AI API, pyttsx3, geocoder, pytz

- Created a smart engine offering food and movie suggestions based on user emotion, location, time, and mood.
- Integrated voice output and geolocation awareness for a personalized and immersive recommendation experience. [\[View\]](#)

AI-Powered Course Recommendation and Learning System

GenAI, YouTube Data API, ReactJS, Firebase

- Developed a YouTube-based learning platform with personalized course paths and video recommendations using Gemini Pro.
- Auto-generated quizzes and summaries with interactive Q&A from transcript data to aid learning. [\[View\]](#)

Automated Road Assessment System

Python, TensorFlow, OpenCV, Flask, HTML/CSS/JS, Render

- Created a web platform using CNN and image processing for pothole and crack detection with GPS tagging.
- Included heatmap visualization, defect severity estimation, and an admin dashboard for issue reporting. [\[View\]](#)

DocuWeb AI – Document and Web QA Chatbot

Flask, HTML/CSS, JavaScript, LangChain, Gemini Pro, FAISS

- Built a chatbot capable of answering questions from PDF, DOCX, XLSX, and web URLs using vector search and embeddings.
- Supported file uploads, session history, and multi-turn chat, enhancing document and web searchability. [\[View\]](#)

Experience & Internships

STAR BLIND WELFARE TRUST PORTFOLIO SITE

HTML/CSS, JavaScript, Bootstrap, GitHub Pages

- Created and launched a responsive website to highlight the services and activities of the STAR Blind Welfare Trust.
- Implemented accessible design and clear layout with contact forms to help connect visually impaired individuals to needed support. [\[View\]](#)

Publications

Driver's Buddy - Drowsiness Detection and Emotion Based Food Recommendation System (IEEE)
[\[Yet to Publish\]](#)

Certifications

- Completed **AWS Academy Cloud Architect** offered by AWS Academy.
- Certified as a **Software Developer** at Ace Computer Center, Madurai.

Achievements

- Winner at **HackFest INFINIX'25** at Thiagarajar College of Engineering for developing an innovative web solution.
- Runner (2nd Prize) at **NeonHacks'25** at Velammal College of Engineering and Technology for developing an AI-integrated personalized learning system.