

VINOTH KUMAR THOPPAE SETHURAMAN

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EDUCATION

BTECH in Information Technology Anna University - Thiagarajar College of Engineering	2022 – Present
CGPA : 7.28 (CGPA (Out of 10) up to 5th semester)	
12th Grade State Board - C.E.O.A Matric Higher Secondary School	2021 – 2022
PERCENTAGE : 91.83%	
10th Grade State Board - C.E.O.A Matric Higher Secondary School	2019 – 2020
PERCENTAGE : 95.6%	

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.

- Developed a real-time driver monitoring system using OpenCV, MediaPipe, and EAR/MAR metrics to detect drowsiness and yawning with alert notifications and live video feedback.
- Integrated a fine-tuned MobileNetV2 model for facial emotion recognition (81% accuracy) and used location/time data to generate food recommendations via Google Generative AI and LangChain.
- Enhanced user experience with geolocation-based context, mood-aware suggestions, and natural voice output using pyttsx3, creating a smart travel assistant for driver safety and comfort.

[AI-Powered Recommendation System](#) | Python, Google Generative AI API, pyttsx3, geocoder, pytz [\[Live Demo\]](#).

- Developed a system that provides **real-time food And Movie suggestions** based on the user's **emotional state, location, and current time and Mood, Language, Genre** using **Google Generative AI and LangChain**.
- Integrated **geolocation to detect city** and country from the user's IP and used **pytz to fetch local time** for accurate context-based recommendations.
- Implemented **text-to-speech (TTS) with pyttsx3** to read out food recommendations in a natural, engaging voice, improving user experience during travel.

[AI-Powered Course Recommendation and Learning System](#) | GenAI, YouTube Data API, ReactJS, Firebase [\[Live Demo\]](#).

- Developed an AI-driven e-learning platform that generates **personalized course roadmaps** using Google Gemini Pro and **recommends highly liked YouTube videos** via the YouTube Data API.
- Implemented key learning features, including **video summarization, an AI-powered query bot, and an auto-generated quiz** based on watched content using video transcripts & Gemini Pro.
- Firebase For Hosting and Data Storage.

[Automated Road Assessment System](#) | Python, TensorFlow, OpenCV, Flask, HTML/CSS/JS, Render [\[Live Demo\]](#).

- Developed a web-based platform for real-time detection of potholes and road cracks using a custom CNN and image processing, achieving **92% pothole and 88% crack detection accuracy**.
- Implemented **GPS-based location capture, defect size estimation**, and a full-featured **report management system** with status tracking and admin dashboard.
- Deployed on Render with a **custom domain**, including **severe location detection** via heatmaps to support prioritization and government reporting.

[DocuWeb AI](#) | Flask, HTML/CSS, JavaScript, LangChain, Gemini Pro, FAISS, Google GenAI [\[Live Demo\]](#).

- Developed **DocuWeb AI**, a chatbot to interact with **PDF, DOCX, XLSX, and website** content using **natural language**.
- Used **LangChain, FAISS, and Google Gemini Pro** for embeddings, vector search, and AI responses.
- Hosted on **Render** with a custom domain, supporting **file/URL uploads, multi-session chat, and session history**.

EVENTS ATTENDED

- Participated in **24-Hours Inter Department Hackathon in Association with Honeywell Technology Solutions**.
- Selected from the regional round and attended the 24 hour hackathon 'HackFest' conducted by PSGiTech, Coimbatore.

CERTIFICATIONS

- **AWS Academy Cloud Architecting** offered by AWS Academy.
- **Java Programming Fundamentals** offered by Infosys springboard.
- **Blockchain Basics** Offered By **University At Buffalo (UB)**.
- **Software devoloper** At **Ace Computer Centre (MADURAI)**.

POSITIONS HELD

- **Student Ambassador** of **AI CONSORTIUM** of our College.
- **NSS (National Service Scheme)** Volunteer.
- Member At **TCE IT BRANDING TEAM**.
- Office Bearer of **DATA ENGINEERING SIG OF IT DEPARTMENT**.

ACHIEVEMENTS

- **Winner at HackFest INFINIX'25** at **Thiagarajar College of Engineering** for developing an **innovative web solution**.
- **Runner (2nd Prize)** of **NeonHacks'25** at **Velammal College Of Engineering And Technology** For Developing AI Integrated Personalized Learning.
- **Designed and deployed** the **official website** for **Star Blind Welfare Trust** using **HTML, CSS, JavaScript, and Bootstrap**, hosted on a **custom domain** via **GitHub Pages**.