# VINOTH KUMAR THOPPAE SETHURAMAN

+91-8637648274 | Portfolio | t.s.vinoth27@gmail.com | LinkedIn | GitHub

# **EDUCATION**

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

## <u>SKILLS</u>

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 Devolopment.

**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.

#### <u>AI-Powered Recommendation System</u> | 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.

Al-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.

#### Star Blind Welfare Trust Official Website | HTML, CSS, JavaScript, Bootstrap, GitHub Pages [Live Demo].

- Designed and developed a responsive, multi-page website for the **Star Blind Welfare Trust** to showcase their initiatives, events, and contact details in a clean and accessible format.
- Implemented Bootstrap for mobile-first design and consistent UI components, enhancing usability across devices.
- Hosted the site on a **custom domain** using **GitHub Pages**, ensuring easy updates and free, reliable deployment without server costs.

# **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 (2<sup>nd</sup> Prize) of NeonHacks'25 at Velammal College Of Engineering And Technology For Devoloping 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.