

# VINOTH KUMAR THOPPAE SETHURAMAN

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## EDUCATION

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

## 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

**Drowsiness And Yawn Detection System** | Jupyter Notebook, **Python, OpenCV, MediaPipe, NumPy**

- Developed a **real-time driver safety system** using Python, OpenCV, and MediaPipe to monitor drowsiness through **Eye Aspect Ratio (EAR)** and detect yawning via **Mouth Aspect Ratio (MAR)**.
- Implemented **real-time alerts** using Pygame Mixer for prolonged eye closure (drowsiness) and frequent yawning, **displaying live metrics** (EAR, MAR, drowsiness time, yawn count) on a video feed.
- Enhanced safety and usability by achieving accurate **face landmark detection**, robust real-time performance, and time-based fatigue monitoring.

**Facial Emotion Detection Using Deep Learning** | **Python, TensorFlow, Keras, OpenCV**

- Built and trained a deep learning model using the **FER-2013 dataset** for emotion classification, implementing **MobileNetV2 with fine-tuning for 7 emotions** (angry, happy, sad, disgust, fear, neutral), achieving **81% accuracy after 12 epochs**.
- Preprocessed the dataset by resizing, normalizing, and labeling images, and used **Haarcascade frontal face detection** for real-time facial detection and emotion prediction.
- Implemented real-time emotion classification using TensorFlow, Keras, and OpenCV, **processing webcam** feed to predict emotions live.

**AI-Powered Travel Food Recommendation System** | **Python, Google Generative AI API, pyttsx3, geocoder, pytz**

- Developed a system that provides **real-time food suggestions** based on the user's **emotional state, location, and current time** 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**

- 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.

## 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 Developer At Ace Computer Centre (MADURAI)**.

## POSITIONS HELD

- 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**.
- Winner (2<sup>nd</sup> Prize) of NeonHacks'25 at Velammal College Of Engineering And Technology** For Developing AI Integrated Personalized Learning.