SANJAY KUMAR

Student | Full stack web developer
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EDUCATION

AI - Ameen Engineering College

BE IN COMPUTER SCIENCE
2020-2024 | CGPA: 7.96/10.0

P K P Swamy Matric HSS

Higher Secondary Education in Bio-Maths
Year of Passing : July 2020

LINKS

Github: https://github.com/sanjaykumarsmrt

LinkedIn: https://www.linkedin.com/in/sanjaykumarpadma23/

HackerRank: https://www.hackerrank.com/profile/sanjaykumarsmrt

SKILLS

Programming:

C, Python, HTML, CSS, JavaScript, SQL

Frameworks/Libraries:

React, Bootstrap, REST APIs, Flutter, Machine Learning, Pandas, Numpy, TensorFlow, Django

Tools & Platforms:

Postman, Node.js, MongoDB Atlas
Git and GitHub

Development Practices:

Responsive Design, Version Control, Code Reusability, API Integration, Error Handling, Code Optimization

COURSE WORK

Data Structures and Algorithms
Operating Systems
Object Oriented Programming
Machine Learning using Python

CERTIFICATION

Python, Flutter, Machine Learning, Full Stack Web Development

INTERNSHIPS

Front-End Development Intern at LitzTech, Javascript at TRONSTRIDEFZC, and Flutter

EXPERIENCE

Full-Stack Web Development Projects

Netflix Clone: Built a Netflix clone using React.js for the front-end, Node.js for the back-end, and MongoDB for user and content management. Integrated Firebase for user authentication, enabling sign-up, login, and content recommendations. Implemented video streaming features and adynamic, responsive UI using CSS, Gridand, Flexbox for a seamless user experience on multiple devices.

Sign Language Recognition and Translation App: Developed across - platform mobile app using Flutter for real-time sign language recognition. Utilised TensorFlow Lite for gesture recognition and integrated Flutter TTS for speech output, enabling communication between deaf and hearing individuals.

E-Commerce Website: Created a full-stack web application using React.js for front-end development and Node.js for backend services. Integrated MongoDB for user management and product handling, optimising the user experience and data flow.

Airbnb Clone: Developed a full-stack Airbnb clone with React.js for the front-end and Node.js for the back-end. Utilised Google Maps API to allow users to search for properties by location and filters. Integrated Stripe for payment processing and implemented user authentication with Passport.js. Created a booking system and included a rating/review system for users to share feedback.

Weather App: Created a real-time weather app using React.js and Node.js that fetches data from the Open Weather API. The app allows users to view weather conditions, temperature, and forecasts based on location. Implemented user-friendly UI with responsive design to ensure the app functions well across different screen sizes.

Machine Learning Projects

Sign Language Gesture Recognition: DevelopedanddeployedaTensorFlowmodel utilising LSTM, CNN, and RNN architectures to recognise and classify sign language gestures from images. Preprocessed datasets with Pandas and NumPy for data cleaning, normalisation ,and feature extraction. Optimised the model for faster inference and enhanced accuracy, achieving high performance on image classification tasks.

Green Hydrogen Optimization:
The performance of renewable energy systems, particularly in the production of green hydrogen. Leveraged Pandas for handling and analysing time-series data, and used NumPy for efficient mathematical operations. Developed predictive models to forecast energy production and optimise system efficiency, contributing to sustainable energy solutions.

PROJECT

Sign Language Recognition and Translation App

Developed a mobile app using Flutter for sign language recognition, utilising TensorFlow Lite for gesture classification and Flutter TTS for real-time speech translation. The app recognises sign language gestures via the camera and converts them into both text and speech, bridging communication gaps between deaf and hearing individuals.

PUBLICATIONS

[1] A Novel Ensemble Machine Learning Approach for Optimising Sustainability and Green Hydrogen Production in Hybrid Renewable-Based Organic Rankine Cycle-Operated Proton Exchange Membrane Electrolyser System. (under review)

[2] Comparing Machine Learning algorithms to predicting operating parameters and performance metrics in a hybrid solar-biogas energy system for power and green hydrogen production. (under review)