Surya Vignesh Kapuganti

Hyderabad | P: +91 9059876451| suryavigneshkapuganti@gmail.com |Portfolio |GitHub | Linkedin

EDUCATION

JNTUH UNIVERSITY COLLEGE OF ENGINEERING MANTHANI Peddapalli ,TG
Bachelor of Technology Expected August 2025
Major in Computer Science;
Cumulative GPA: 7.09/10.0;
Relevant Coursework: Software Engineering; Database Management; Operating Systems; Algorithms; Artificial Intelligence; Machine Learning

WORK EXPERIENCE

MENTORNESS
Machine Learning Intern June 2024 – July 2024

- Implemented a linear regression model in Python to predict employee salaries based on past experience, enhancing data-driven decision-making in compensation strategies.
- Engineered an advanced algorithm that processed over 10 million transaction records daily, reducing false positives by 30%, thereby increasing operational efficiency in monitoring suspicious activity within the firm's systems.

TECHSAKSHAM
Artificial Intelligence Intern Jan 2025 – Feb 2025

- Assimilated deep learning principles through textbook study and research paper analysis, culminating in the ability to articulate and apply five distinct neural network architectures for predictive modeling.
- Enhance my technical skills and strengthen my problem-solving abilities.

PROJECTS

Exam Ease: Sep 2024

- Engineered a PDF-to-CBT conversion application using Flask and React + TypeScript, enabling educators to create customized, interactive computer-based tests with 95% format accuracy for students.
- Enabled seamless conversion and customization of exam content, improving the efficiency of test creation for educators and institutions.

Restaurant Review Sentiment Analyzer:

- Designed and deployed a sentiment analysis tool using a Naive Bayes classifier; model processed 10,000+ restaurant reviews, providing actionable insights that boosted local restaurant partner satisfaction scores.
- Engineered a Naive Bayes classifier utilizing a Bag of Words model, processing text data from TSV datasets, achieving a 15% improvement in sentiment prediction accuracy for customer feedback analysis.

Sentiment Analysis of IMDB Movie Reviews with LSTM:

- Pioneered a deep learning application predicting sentiment of IMDB movie reviews, leveraging Python, TensorFlow, and Keras to orchestrate an LSTM-based neural network achieving 92% accuracy in sequential text analysis.
- Utilized NLTK for text preprocessing, tokenization, and padding, combined with an LSTM model to capture long-term dependencies in review data, achieving robust sentiment classification.

Veggie Recognizer: Aug 2024

- Engineered a Veggie Recognizer application using React, Vite, and TypeScript (TSX), delivering a dynamic and responsive UI integrated with a Flask-powered ML backend for accurate fruit and vegetable identification.
- Designed and integrated a custom-trained ML model for real-time classification of fruits and vegetables, ensuring seamless frontend-backend communication via Flask APIs.

Weather Vision:

- Designed and deployed a CNN-driven cloud classification model that achieved 90% test accuracy in predicting rainfall likelihood based on cloud image analysis.
- Implemented end-to-end encoding and decoding pipelines with a fast, responsive UI, enhancing both security and usability.

Steganography-Website:

- Architected a secure Steganography Web Platform using Flask and React + Vite + TSX, enabling users to embed and retrieve sensitive data (e.g., email, passwords) inside images through advanced steganographic encoding.
- Implemented end-to-end encoding and decoding pipelines with a fast, responsive UI, enhancing both security and usability.

AI Powered College Recommendation System:

- Built an **AI-powered College Recommendation System** that clusters colleges based on entrance exam criteria and seat selection, with a custom-trained model and data scraped using **BeautifulSoup**.
- Developed a **fully responsive and free-to-use web platform** using **Flask (backend)** and **React + Vite + TSX (frontend)**; currently 90% complete with chatbot integration in progress.

Collage Mosaic Generator:
- Created a high-performance Collage Mosaic Generator in Python that reconstructs a target image using a grid of color matched tile images, maintaining the overall structure and aesthetic.
- Focused on algorithmic efficiency and visual fidelity, delivering a clean, responsive user interface optimized for smooth interaction.

AI-Fitness-Trainer-Squats-Analysis:

- Developed a real-time squat posture evaluation system using OpenCV and Mediapipe, detecting key body landmarks and providing instant visual and audio feedback on squat form.
- Implemented a state-based counter with inactivity detection and error classification, improving posture accuracy and automatically resetting the counter after prolonged idle periods.

Few other projects: hindi-to-english-ocr **;** weather app django; simple chatbot **;** ,Diet Recommendation System**;**
Letter Writer **;** OCR Video GPU **Currently working on:** UPI App **;** Vehicle Pooling App

ACTIVITIES

JNTUH UCEM TECHNICAL CLUB   Peddapalli , TG
Committee member   July 2023 – Nov 2023
- Served as a committee member of the first-ever coding club at JNTUH, focused on teaching coding skills to peers and juniors.
- Taught juniors the fundamentals of C programming and introduced them to basic Python concepts, fostering a strong foundation in coding.

ADDITIONAL

- **Programming Languages:** Python, JavaScript, Java, C, Dart(Beginner), SQL.
- **Web Technologies & Frameworks:** HTML, CSS, Tailwind CSS, React.js (Intermediate), Vite (Intermediate), TypeScript (Intermediate), Flask, Firebase, MongoDB, MySQL.
- **Mobile Development:** Flutter (Beginner), React Native (Beginner).
- **Tools & Platforms :** Git, GitHub, VS Code, Postman, Jupyter Notebook, Streamlit.
- **Libraries & APIs:** BeautifulSoup(bs4), NumPy, Pandas, OpenCV, EasyOCR, Matplotlib, Scikit-learn, YOLOv5, Framer Motion.
- **Database Technologies:** MySQL, MongoDB, Firebase Realtime Database , PostgreSQL(Beginner).
- **Others:** REST APIs, Responsive Web Design, Data Scraping, Machine Learning (Beginner), Model Deployment.
- **Languages:** Fluent in Telugu, English; Conversational Proficiency in Hindi
- **Awards:** Participated in Aakriti Fest Technical Competition (2023),Participated in Flipkart GRiD 6.0

CERTICATIONS:

Udemy - Mastering Data Magic :Power BI + Tableau + SQL , Analytics - [Link](#)

Deloitte – Data Analytics Job simulation – [Link](#)

HackerRank -Python Basics – [Link](#)

Udemy – Introduction to Software Engineering – Link

Great Learning Academy – UI/UX For Beginners – [Link](#)

Udemy - Hands-On React: Build Advanced React JS Frontend with Expert – [Link](#)

Udemy – 2025 Data Structures Using Python – [Link](#)

Udemy – Python Numpy Tutorial For Beginners – [Link](#)