Yash Mehrotra

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GitHub | Portfolio | LinkedIn

Education	
IIT Madras BS Data Science and Appliction 2023 - Present	• **Lead** : Linux Community, Google Student Developer Club, IIT Madras. • **Core** : Webops Team, BS Degree, IIT Madras.

INTERNSHIP EXPERIENCE	
IIT Madras Data Science Intern Dec-2024 - Present	• Developed a super-fast, CPU-optimized face recognition system capable of real-time detection, integrated with a React-based dashboard and FastAPI backend, deployed on AWS cloud services for scalability. • Designed and implemented a full-stack vehicle counting solution using Azure services, managing both backend and frontend with high-speed scripts and Flask APIs, displaying real-time analytics using React,and ChartJS. • Engineered a robust backend for both systems using cloud-native architecture on AWS and Azure, ensuring fast response times and efficient real-time data handling for smooth, interactive user experiences.
SkyGad Ai Development Aug-2024 - Dec-2024	• Engineered a high-performance company website using Next.js and FastAPI, improving load times by 40% and supporting 1000+ concurrent users. • Fine-tuned LLAMA-2 model for mental health applications, achieving 15% improved accuracy and 30% reduction in inappropriate responses. • Developed an advanced RAG pipeline with custom indexing and ranking, reducing query time by 50% and increasing result relevance by 35%.

Projects	
BhashaSarthi	• **Made Using:** Flask framework and the googletrans library of Python. • **Purpose:** Bhasha Sarthi is designed to facilitate seamless translation and language understanding, leveraging Google's powerful translation capabilities to break language barriers. • **Benefits:** It aids in making content accessible to a wider audience by providing accurate translations, thus enhancing communication and understanding across different languages.
Promotify	• **Made Using:** Flask framework and SQLite3 for database management. • **Purpose:** Promotify is likely a platform aimed at promoting content or services, utilizing Flask for server-side operations and SQLite3 for storing and managing data efficiently. • **Benefits:** It helps in organizing promotional campaigns or content in a structured manner, making it easier to reach and engage with the target audience through effective data management and web services.
Chatwallah	• **Made Using:** Flask, Socket.IO for real-time web socket communication, along with JavaScript, HTML, and CSS for the frontend. • **Purpose:** Chatwallah is designed as a real-time chat application, facilitating instant messaging and communication among users. • **Benefits:** It enhances user interaction by providing a platform for real-time conversations, supported by a responsive and user-friendly interface, thanks to the combination of Flask, Socket.IO, and modern web technologies.
Data Analysis on Zomato Dataset	• **Made Using:** Pandas, Matplotlib, Seaborn. • **Purpose:** This project aims to analyze the Zomato dataset to uncover insights into customer preferences, popular cuisines, and restaurant ratings. • **Benefits:** By leveraging data visualization and analysis techniques, it provides valuable insights that can help businesses understand market trends and customer behavior.
Emotion Detection with YOLOv5	• **Made Using:** Custom trained YOLOv5 model. • **Purpose:** The project focuses on detecting faces in images or real-time video streams and identifying emotions such as anger, happiness, disgust, and sadness. • **Benefits:** It can be used in various applications like security systems, customer feedback analysis, and interactive marketing strategies by understanding user emotions.

Co-Curricular Activities	
Public talks and Workshops	• Speaker at GDSC, IIT Madras on the topic "Dumping of Windows", 2024. • Speaker at GDSC, IIT Madras on the topic "Git and GitHub", 2024. • Host and organizer for the workshop "AI Horizons: Navigating the Future of Technology" with "Prof. Sudarshan Iyengar" in 2024, online. • Arranged the workshop "Liftoff" with "Agnikul's Co-Founder" at IIT Madras in 2024, offline.
Achievements	• Runner up in Smart India Hackathon 2023

Skills	
Web Development	NodeJs, ExpressJs, ReactJs, NextJs, FastAPI, SocketIO
Machine Learning	Scikit Learn , Pytorch , Pandas , Numpy , Matplotlib , Seaborn
Mobile App Dev	React Native
Automation & DevOps	Git, GitHub, Docker
Database management	MongoDB, Redis, SQLite3 , SQL