

BATHALA HARSHA

AI/ML Engineer | Data Science Enthusiast | Python & GenAI Developer

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PROFESSIONAL SUMMARY

Final-year CS undergrad with experience building AI-powered and full-stack web solutions. Built 3+ projects with 90%+ accuracy and 30% efficiency gains using Python, Flask, YOLOv8, and MongoDB. Currently expanding into GenAI, NLP, and cloud deployment with tools like Hugging Face, LangChain, and Docker. Known for leadership and team collaboration in high-pressure events.

EDUCATION

- Jain (Deemed-To-Be-University)**
BE. Computer Science and Engineering
Electives - Full stack development CGPA - 8.17

Bangalore, India
Present (2022 - 2026)

PROJECTS

- [Crowd Density Analyzer \(YOLOv8 + ByteTrack + Twilio\)](#)**
Tech Stack: YOLOv8, ByteTrack, OpenCV, Flask, Twilio API
 - Built a real-time crowd monitoring system to detect, count, and classify individuals as static or moving using YOLOv8 and ByteTrack.
 - Integrated Twilio SMS alerts for real-time notifications when crowd density thresholds are breached.
 - Achieved 92% object detection precision in complex, crowded scenes after optimizing model thresholds.
 - Additional features: heatmap visualization, static/moving person classification, entry/exit tracking, and CSV export.
- [Gesture-Based Virtual Mouse \(Human-Computer Interaction System\)](#)**
Tech Stack: Python, MediaPipe, PyAutoGUI, OpenCV
 - Developed a hardware-independent virtual mouse system using hand gesture recognition with 95% accuracy.
 - Engineered gesture mappings such as finger taps for clicks and wrist rotation for scrolling, simulating AR/VR-like control.
 - Tested across multiple devices for real-time performance with minimal latency.
 - Designed for potential applications in touchless computing and virtual interaction systems.
- [SteamyBites – AI-Powered Food Delivery Platform](#)**
Tech Stack: Flask, MongoDB, Scikit-learn, HTML/CSS, JavaScript
 - Designed and deployed a full-stack web application enabling personalized food recommendations using TF-IDF and cosine similarity.
 - Integrated a Bangalore-specific delivery validation system and a dynamic cart checkout flow.
 - Implemented a glassmorphic UI using pure CSS, improving user engagement and visual appeal.
 - Achieved 30% faster food search and 85%+ recommendation accuracy through ML integration.

WORK EXPERIENCE

- [Data Science Intern | Oasis Infobyte \(Virtual\) | July 2025 – Aug 2025](#)**
 - Completed a 4-week AICTE-approved internship solving real-world data science problems.
 - Built a Spam Detection Classifier achieving 97.8% accuracy using Logistic Regression and TF-IDF.
 - Predicted Used Car Prices with 95.8% R² score using Random Forest Regression.
 - Performed Exploratory Analysis on Indian Unemployment Data using Pandas, Matplotlib, and Seaborn.
 - Tools Used: Python, Pandas, Scikit-learn, Matplotlib, Seaborn, Jupyter Notebook
- [Accommodation Team Member – Jain Utsav 2023 \(Quadrennial National Fest\)](#)**
 - Assisted in managing accommodation for 200+ participants from 15+ states
 - Supported room allocation, vendor coordination, and on-ground issue resolution
 - Contributed to smooth operations and improved check-in efficiency during the 4-day event

SKILLS

Programming Languages & Core Tools: Python, SQL, Pandas, NumPy, Scikit-learn, Git

Data Visualization: Matplotlib, Seaborn, Power BI

Machine Learning & Deep Learning: TensorFlow, PyTorch, Hugging Face, OpenCV, YOLOv8, MediaPipe

Generative AI & NLP: OpenAI API, LangChain, Prompt Engineering

Deployment & Cloud Technologies: Flask, Streamlit, FastAPI, Docker, AWS

Other Tools & Platforms: Jupyter Notebook, Google Colab, Github, Gradio, VS Code, PyAutoGUI

Web Technologies: HTML, CSS, JavaScript, Flask, MongoDB

Soft Skills: Leadership, Team Collaboration, Active Listening, Adaptability, Problem Solving

CERTIFICATIONS

- [Python Basics](#) – Coursera, Jan 2025
- [IBM Machine Learning](#) – Coursera, Oct 2024
- [Cybersecurity for Everyone](#) – Coursera, Feb 2025