

Gauravi Singh

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SKILLS

Technical Skills: Machine Learning, Data Structures and Algorithms, Exploratory Data Analysis (EDA)

Languages: Python, C/C++, JavaScript, HTML/CSS

Frameworks & Tools: Flask, MERN (basics), Jupyter, Git, Google Cloud Platform

Libraries: Tensorflow, pandas, NumPy, OpenCV, Tesseract, Matplotlib

Soft Skills: Communication, Leadership, Adaptability, Creativity, Public Speaking

EDUCATION

Manipal Institute of Technology

Bachelor of Technology in Computer Science and Engineering (CGPA: 9.2)

Bengaluru, Karnataka

July 2023 – Present

EXPERIENCE

Defence Research and Development Laboratory (DRDO)

Student Trainee

Hyderabad, Telangana

May 2024 – July 2024

- Explored a MERN-based satellite orbit tracker that processed **500+ Two-Line Element (TLE) sets** daily, implementing machine learning algorithms that **improved orbit prediction accuracy by 27%** compared to traditional SGP4 propagation methods.
- Acquired knowledge about Space Situational Awareness (SSA) and **contributed to analyzing 50+ satellite trajectories** for collision avoidance and improved orbital forecasting.

PROJECTS

PG's Bistro and Cafe | *Flask, React, MySQL, Figma*

[Link](#)

- Developed a full-stack Restaurant Management System using Flask (backend) and React (frontend) with MySQL, enabling efficient order management, reservations, and role-based user authentication for customers and managers.
- Designed and implemented a structured database schema with 8+ tables, **optimizing data retrieval efficiency by 30%** and improving system performance for order management, reservations, payments, and user interactions.

Plant-Based Disease Detection | *Deep Learning, Streamlit, Python, Jupyter*

[Link](#)

- Developed a CNN for plant disease classification, **achieving 99.05% training and 96.56% validation accuracy**, demonstrating expertise in machine learning, computer vision, and agricultural technology.
- Engineered an interactive Streamlit web application enabling users to upload plant images for automated, AI-powered disease identification and analysis.

Invisibility Cloak | *Python, OpenCV, Flask, Git*

[Link](#)

- Engineered an Invisibility Cloak application using OpenCV that processes video at **30+ frames per second**, achieving **95% accuracy** in real-time colour detection and seamless background replacement.
- Implemented HSV colour space filtering with **± 5 threshold precision**, reducing background noise by **80%**.

PUBLICATIONS

Research paper on **anomaly detection in blockchain transactions within the Open Metaverse**, accepted at IEEE Conference, 2025.

POSITIONS OF RESPONSIBILITY

InternLoom (Startup-MIT)

AI Developer

Bengaluru, Karnataka

March 2025 – Present

- Developing AI-driven solutions to bridge the gap between students and companies for internships.
- Collaborating with the team to improve platform features and enhance user experience.

GSSoC '24 Extended

Contributor

Oct 2024 – Nov 2024

- Contributed to 10+ open-source projects** by developing features, fixing bugs, and improving documentation.
- Collaborated with a diverse team to enhance user experience, engage in code reviews, and brainstorm solutions for project challenges.