






# AYUSH KUMAWAT

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## EDUCATION

### ● Sage University, Indore

July 2020 - July 2024

B.Tech. (Hons.) in Data Science (CSE)

CGPA : 8.6

Societies: Chairperson of IAC SAGE ACM (Association of Computer Machinery) student chapter.

## WORK EXPERIENCE

### ● ISRO - Indian Space Research Organization, Ahmedabad : AI Researcher

Aug 2024 - Dec 2024

- I contributed to the development of real-time fault detection algorithms using machine learning on the Jetson AGX Orin platform. My work focused on enhancing the reliability and autonomy of space systems through intelligent AI-driven solutions.

### ● Google for Developers : AI-ML Intern

Jan 2024 - Mar 2024

- I focused on image classification with object detection, building and optimizing models for real-world applications, and deploying them on Google Cloud Platform.

## PATENTS PUBLISHED

### ● Voice Automated Table Service System for Virtual Ordering

Issued on Mar 17, 2023

Application No. - 202321013305

### ● System for Identifying Threat Using Surveillance Systems

Issued on Nov 22, 2024

Application No. - 202421078621

## PROJECT EXPERIENCE

### ● Generative AI based Digital Learning Platform

- Developed a GenAI-based digital learning platform featuring a virtual teacher that interactively explains school textbooks using Gemini 2.0 Flash model with custom system prompt templates to personalize teaching.
- Integrated Eleven Labs TTS for natural-sounding voice output and Whisper for voice recognition, enabling fully voice-enabled, conversational learning experiences that mimic real classroom interactions.

### ● AI - MedDiagnose

- Developed a web application that predicts the likelihood of diseases based on user-inputted symptoms.
- Utilized Python, Flask, HTML, CSS, JavaScript, and scikit-learn to implement machine learning algorithms for predictive analysis and diagnostics, considering symptoms, medical history, and lifestyle.

### ● Attendance using Facial Recognition with Gender Detection

- Developed a real-time facial recognition attendance system on NVIDIA Jetson Nano, utilizing OpenCV and Tkinter GUI, enabling accurate identification with a single high-quality image per individual.
- Implemented anti-spoofing measures to prevent photo-based impersonation and integrated optional emotion and gender detection features for enhanced classroom analytics.

### ● Region-Based Aerial Intrusion Detection

- Developed a region-based real-time drone detection system using YOLOv5 and OpenCV, capable of monitoring a user-defined area and triggering alerts upon drone intrusions.
- Trained on a curated dataset of 1,400 drone images via Roboflow, ensuring accurate detection across diverse drone models and environmental conditions.

## ACHIEVEMENTS & CERTIFICATIONS

- NVIDIA - Earned recognition as a Jetson AI Specialist by NVIDIA, demonstrating proficiency in AI developments
- Google Cloud & AMD - Won the Solving for India Hackathon, demonstrating innovation and problem-solving skills.
- Sage University - Received Academic Excellence Award for outstanding performance in all academic categories.
- IBM - Applied Data Science Capstone Certification

## SKILLS

- Programming** : Python, SQL, HTML, CSS, JavaScript
- Technologies and Frameworks** : React.js, FastAPI, LangChain, OpenCV, YOLO, Flask
- AI and ML** : Object Detection, Image Classification, Prompt Engineering, RAG Pipelines, LLMs
- DevOps, Databases and Deployment Platforms** : Git, GtiHub, PostgreSQL, Google Cloud Platform (GCP), NVIDIA Jetson Nano, Jetson AGX Orin, Raspberry Pi