

# Sowmya Kanithi

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## Objective

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Proactive and passionate Machine Learning Engineer with strong Python skills and hands-on experience in building and deploying real-world ML models. Proficient in computer vision (YOLO, OpenCV), NLP (NLTK), and deep learning using TensorFlow. Skilled in creating scalable solutions with Streamlit and Scikit-learn, and currently exploring LLMs, LangChain, and conversational AI. Seeking impactful roles in ML, NLP, Deep Learning, or Python development within fast-paced, innovation-driven teams.

## Technical Skills

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- **Programming Languages:** Python, C++, HTML, SQL, Machine Learning, Deep Learning.
- **Libraries and Frameworks:** NumPy, Pandas, Matplotlib, OpenCV, YOLOv4, TensorFlow, scikit learn, seaborn, NLTK, Hugging Face Transformers
- **Tools and Platforms:** Jupyter Notebook, Google Colab, Pycharm Community, streamlit, Git, Anaconda, Github, VS Code, Dev C++, Matlab, Windows.
- **Databases:** SQL
- **AI Frameworks:** Hugging Face transformers, LLM, RAG
- **Soft Skills:** Leadership, Analytical thinking, Ownership, Mentorship, Team collaboration, Event Management, Time Management, Finance and Budget analysis, Adaptability, Networking, Organizing

## Education

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| • <b>Bachelor Of Technology (B.Tech E.C.E)</b><br>Rajiv Gandhi University Of Knowledge Technologies, ONGOLE | <b>2022-2026</b> | <b>CGPA: 8.4</b> |
| • <b>Pre University Course (PUC M.P.C)</b><br>Rajiv Gandhi University Of Knowledge Technologies, ONGOLE     | <b>2020-2022</b> | <b>CGPA: 9.0</b> |

## Experience

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**Machine Learning Intern : InternshipStudio (Remote)**

Aug 2024 – Jan 2025

### Project:

- Developed machine learning models to predict student academic performance using features like attendance and study hours, improving prediction accuracy.
- Utilized data preprocessing, feature engineering, and algorithms such as Random Forest and Linear Regression with Python and Scikit-learn for effective analysis and insights.

## Projects

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**AI Based Weapon Detection Surveillance System**  | [GitHub](#) |

- Awarded 2nd Prize for Project Presentation at Technova'25, IIIT Ongole, honored by the Director of IIIT Ongole campus.
- A real-time AI surveillance system built with YOLOv8 and Streamlit to detect weapons (guns, knives, rifles) from webcam, images, and videos.
- This project helps automate threat detection for safety monitoring in public and private spaces.
- Features Real-time webcam detection Upload and analyze images and videos Automatic logging of detected weapons with time, confidence, and source Downloadable detection log (CSV)

### Resume ATS tracking system🔗 | [GitHub](#) |

-A machine learning-based HR related system used for resume ATS tracking,resume parsing.

-Job Categorization , ATS Score Predictor (Streamlit App) A powerful web app that analyzes resumes, predicts job categories using machine learning,NLP and calculates ATS (Applicant Tracking System) keyword match scores against job descriptions.

- Features - Upload resume in PDF format - Clean and process text using NLP - Predict job category using a trained ML model - Compute ATS keyword match score based on job description

- Technologies Used - Python , Streamlit (for frontend) , Scikit-learn (for ML modeling) , TF-IDF (for vectorizing resume text) , NLTK (for tokenization and cleaning) , PyMuPDF (fitz) (for extracting PDF text)

### Brain tumor classification using deep learning(CNN)🔗 | [GitHub](#) |

The CNN model achieves high accuracy in distinguishing between tumor types.Visualization of accuracy and loss over epochs indicates effective learning.The model generalizes well on validation data, showing potential for real-world application.Achieved 98 percent accuracy.

### Chat bot using ML in Medical Purpose(Heart Disease)🔗 | [GitHub](#) |

Doctor Bot is a simple conversational chatbot that answers user queries about heart disease by processing medical article content. It uses Natural Language Processing (NLP) techniques to analyze questions and respond with relevant information.

### Movie Recommendation system using ML🔗 | [GitHub](#) |

This project is a content-based Movie Recommendation System built using Python. It suggests similar movies based on genres, overview, crew, director, and keywords using NLP techniques,cosine similarity.

### Spam emails sms classifier🔗 | [GitHub](#) |

A machine learning-based web application that classifies text messages and emails as Spam or Ham (Not Spam) using Natural Language Processing (NLP) techniques and a pre-trained classifier. Built with Python and locally deployed using Streamlit.Achieved accuracy around 98 percent.

### YOLO Object Detection🔗 | [GitHub](#) |

-Real time Object detection using the YOLOv4 (You Only Look Once) algorithm, implemented with OpenCV and Python.YOLOv4 is an improved version of YOLOv3 that provides faster and more accurate object detection in real-time.

## Honours and Certifications

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- edX Verified Certificate IBM PY0101EN|[Certificate](#)|
- Deeplearning for Developers[[Certificate](#)]
- Technova 2nd Prize Certificate for Security surveillance using ML project IIIT ONGOLE[[Certificate](#)]
- Finance and budgeting Committee Student Coordinator [[Certificate](#)]
- edX Verified Certificate Soft Skills|[Certificate](#)|
- OpenCV 4 Certifications from Skillsoft and Simplilearn|[Certificate](#)|
  - \* Intro, Manipulating Images, Advanced Images Operations and Using Raspberry Pi and OpenCV

## Volunteer Experience

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**Student Coordinator:**Department Higher Education Cell

**Student Coordinator:**Department of Placements and Internships Standing Committee

**Finance and Budgeting Committe Coordinator:**Managed and organized institute budget matters in Ornate'25 IIIT ONG.

**Technova Student Coordinater Incharge:** Organized technical events in department