

# Vasu Paul Jayakar

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## SUMMARY

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Passionate AI/ML student with hands-on experience in machine learning, computer vision, and AI-powered application development using Python and modern frameworks.

## EDUCATION

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### Mohan Babu University

B. Tech in Computer Science & Engineering (AI & ML), **CGPA: 7.64**

Sep. 2022 - May 2026

## PROJECTS

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### DocuGenie | Python, LangChain, Streamlit, Google Gemini API, FAISS | [GitHub](#) 2026

- Developed an AI-powered PDF chat and MCQ generation platform using Retrieval-Augmented Generation (RAG) architecture
- Developed **LangChain**, **Google Gemini API**, and **FAISS** to process and retrieve contextual information from uploaded PDF documents
- Designed an interactive **Streamlit** interface enabling conversational querying and automated quiz generation from document content

### TestForge | Python, Flask, PyGAD, REST APIs, unittest | [GitHub](#) 2025

- Engineered a white-box testing framework for RESTful APIs using genetic algorithms to automate fault-revealing test case generation
- Developed API testing workflows with **Flask**, **PyGAD**, and Python **unittest** framework to improve validation efficiency
- Generated automated HTML and JSON coverage reports while identifying critical edge-case failures in API endpoints

### SmartSurveil | Python, OpenCV, YOLOv8, Flask, Supervision | [GitHub](#) 2025

- Developed a zone-based intelligent video surveillance system for real-time object detection and monitoring
- Utilized **Ultralytics YOLOv8**, **OpenCV**, and **Supervision** for region-specific detection across video streams
- Designed a Flask-based web application supporting MP4 upload/download workflows and end-to-end video processing

## SKILLS

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**Programming Languages:** Python, SQL, Java, JavaScript, HTML/CSS, Bash

**Frameworks:** Django, Flask, FastAPI, Streamlit, React, Node.js, Model Deployment

**Libraries:** Pandas, NumPy, Scikit-learn, PyTorch, NLTK, Hugging Face, OpenCV, Data Pipelines

**Data Visualization Tools:** Power BI, Tableau, Matplotlib, Seaborn, Plotly

**Tools & Platforms:** Git, Jupyter Notebook, RESTful API Testing

**Soft Skills:** Leadership, Teamwork, Communication, Collaboration, Problem-Solving, Organizational Skills, Adaptability

## EXPERIENCE

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### AI-ML Virtual Internship | AWS Academy, EduSkills & AICTE Apr 2025 – Jun 2025

- Completed a 10-week virtual internship focused on Artificial Intelligence and Machine Learning concepts
- Worked on machine learning workflows including data preprocessing, model training, and evaluation using Python
- Collaborated on project-oriented AI/ML workflows, strengthening analytical thinking and problem-solving skills

## ACHIEVEMENTS

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### Conference Paper Presentation | 3rd International Conference on BIDA2026 BIDA2026

- Presented the research paper titled “An Intelligent Cloud-Based Framework for Automated Brain Tumor Detection using Deep Learning”

### Core, Registrations Committee | Mohana Mantra 2K24 13,000+ Participants

- Led participant coordination and managed payment records and Entry ID workflows during the fest

### National Hackathon Participation | Samartha 2K25 National Hackathon

- Participated in a team-based problem-solving competition hosted by Mohan Babu University