

# ABHIVANTH R

## Aspiring AI Engineer | IoT Developer

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### SUMMARY

AI Engineer skilled in developing and deploying scalable machine learning models and intelligent agents. Experienced in integrating AI with IoT and building RAG-based chatbot systems for real-world automation and accessibility.

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### SKILLS & TOOLS

- **AI/ML** : PyTorch, Scikit-learn, Langchain , NLP, Deep Learning, OpenCV, CNN, YOLO
  - **Languages** : Python, C, Java, R, SQL (MySQL)
  - **Tools & Platforms** : GitHub, FastAPI, PyMuPDF, Docling, LanceDB, Blender
  - **Hardware/IoT** : Raspberry Pi, Adafruit QT PY RP2040
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### PROJECTS



#### Versatile Mini Robot [↗](#)

Designed a multifunctional robot with features like object recognition, color detection, QR/text scanning, translation, and virtual assistance.

*Technologies* : Python, OpenCV, Raspberry Pi, Sensors

#### NDT Robot for Crack/Defect Detection [↗](#)

Built an autonomous mini robot using ultrasonic, infrared, and eddy current sensors for real-time crack detection with OpenCV and ML.

*Technologies* : Python, OpenCV, Sensors, ML , Raspberry Pi

#### Info Redaction Agent [↗](#)

Built an AI-powered system to automatically detect and redact Personally Identifiable Information (PII) (PDF, text, structured data), ensuring compliance with data privacy standards.

*Technologies*: Python, LangChain, Prompt Engineering, PyMuPDF, Docling, FastAPI

#### College Chatbot [↗](#)

Creating an AI-powered chatbot for automating admissions, events, food orders, and exam prep with real-time data access for our own college.

*Technologies* : Python, Langchain , NLP, Docling , LanceDB , FastAPI

#### Resume Reformer Agent [↗](#)

Developed an AI-powered agent that reformats and optimizes resumes based on job descriptions, enhancing keyword alignment and ATS compatibility using prompt-driven analysis, generates new Resume

*Technologies* : Python , Langchain , Prompt Engineering , PyMuPDF , Docling , FastAPI

#### Exhibit Defect Detection System [↗](#)

Building an AI-CNN-based system integrated with IoT for detecting defects in museum exhibits and enabling predictive maintenance.

*Technologies* : Python, Pytorch, CNN, Raspberry Pi

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### PUBLICATIONS

**Secure and Ethical AI-Driven Approaches to Data Privacy in Sustainable Agriculture** (Accepted for publication)

Press : CRC Book Chapters, Blockchain and AI for Security and Privacy in Smart Agriculture.

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### EDUCATION

**K P R Institute of Engineering and Technology**

B.E. Computer Science and Engineering with Specialization in AIML

CGPA : 8.8

2023-2027