

# AJAIKUMAR E

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## PROFESSIONAL SUMMARY

Aspiring Software Engineer with hands-on experience in full-stack web development and applied machine learning. Proficient in MERN stack, Python, REST APIs, and AI workflows including Retrieval-Augmented Generation (RAG). Focused on building scalable, AI-powered applications with clean, maintainable code.

## TECHNICAL SKILLS

**Programming Languages:** Python, JavaScript

**Web Development:** HTML,CSS ,React.js, Node.js, Express.js, MongoDB, SQL, FastAPI

**AI & Machine Learning:** scikit-learn, SentenceTransformers, FAISS, OpenCV, RAG Pipelines, NLP

**Frameworks & Tools:** Streamlit, Docker, Git/GitHub, N8N, Hugging Face Hub

**Data & Utilities:** Pandas, NumPy, Jupyter Notebook, Google Colab

**Core CS Concepts:**DBMS, Operating Systems, Computer Networks, Linux

**Design Tools:** Figma, Wireframing, Prototyping

## INTERNSHIP

### Machine Learning Intern – LearnNex | Jul 2025- Sep2025

- Completed industry-oriented Machine Learning training and internship
- Built ML models using Python, Pandas, NumPy, and scikit-learn
- Performed data preprocessing, feature engineering, model training, and evaluation
- Applied end-to-end ML workflows on real-world datasets

### EY GDS – Next Gen Intern | Feb 2025 – Mar 2025

- Selected for a competitive internship program focused on enterprise-grade software development
- Worked on MERN stack-based project workflows following professional development standards
- Collaborated in structured project planning, orientation, and execution phases
- Applied best practices in full-stack development and collaborative software delivery

## PROJECTS

### • Retrieval-Augmented Generation for Document Q&A

- Built an AI-powered document question-answering system using RAG architecture
- Processed and chunked PDF documents and stored embeddings in FAISS for fast retrieval
- Integrated Gemini and OpenAI models for accurate, context-aware responses
- Developed an interactive Streamlit application for real-time user interaction
- Improved document information retrieval efficiency for large PDF files

### • Multimodal Vision-Language Pipeline

- Developed an AI system for image captioning, visual question answering (VQA), and segmentation
- Built a React dashboard using shadcn/ui for image upload and query visualization
- Designed a FastAPI backend with dynamic task routing based on user intent
- Integrated BLIP, CLIP, and Segment Anything Model (SAM) using PyTorch

### • Recipe Sharing Platform

- Developed a full-stack web application using MongoDB, Express.js, React.js, and Node.js
- Implemented secure authentication and authorization
- Enabled CRUD operations for user-generated recipes
- Designed a responsive UI for seamless user experience

## EDUCATION

B.Tech in Information Technology

Prathyusha Engineering College | CGPA: 7.9

Higher Secondary Education

St. Pauls Matriculation Higher Secondary School | 79%

Secondary Education

St. Pauls Matriculation Higher Secondary School | 60%

## CERTIFICATIONS

- Introduction to Large Language Models badge - IBM Skill build*
- AI for beginners- HP life
- Foundations of User Experience (UX) Design - GOOGLE*
- Drone X - Drone Hands on Training Program Workshop*