

# Abinish Jha

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## SUMMARY

AI Engineer with a strong foundation in embedded systems and C++ firmware development, bringing hands-on experience in system-level debugging, performance optimization, and production deployments. Experienced in building machine learning and Generative AI solutions, including a RAG-based enterprise Q&A system using vector databases and LLMs. Skilled in data processing, model integration, and end-to-end pipeline development, with the ability to bridge low-level systems engineering and AI-driven applications.

## EXPERIENCE

### Retrieval-Augmented Generation (RAG) Q&A System for Company Documents

#### Freelancing

September 2024 - November 2025, Remote

- Designed and implemented an end-to-end RAG-based Question & Answer system for company knowledge using PDF documents.
- Built an ingestion pipeline to load PDFs, preprocess text, and split documents into semantic chunks.
- Generated vector embeddings for each chunk using an embedding model and stored them in a Chroma Vector Database.
- Implemented a retrieval pipeline that converts user queries into embeddings and performs similarity search against the Chroma DB.
- Retrieved the most relevant document chunks based on cosine similarity for accurate context matching.
- Improved answer accuracy by grounding LLM responses in company-specific documents.

### Embedded Systems Engineer

#### WIPRO

February 2022 - September 2024, Kochi

- Developed and optimized embedded firmware in C++ for printer and peripheral devices.
- Analyzed and debugged printer job failure logs to resolve functional issues.
- Performed functional testing of printer features including print, copy, and fax operations.
- Applied multithreading and parallel programming to improve application performance.
- Managed printer bundle firing and ensured successful production deployments.

## PROJECT

### Diabetes Prediction Project

#### Academic Project

- Developed a machine learning model to predict diabetes using patient health data.
- Performed data preprocessing, including data cleaning, normalization, and feature selection.
- Trained and evaluated classification models to improve prediction accuracy.
- Analyzed model performance using evaluation metrics such as accuracy and confusion matrix.
- Implemented the solution using Python and machine learning libraries.

## EDUCATION

### B.Tech in Computer Science and Engineering

Vel Tech Rangarajan Dr Sagunthala R&D Institute of Science & Technology • Chennai, India • 2021 • 7.86

## CERTIFICATIONS

### Azure Fundamentals (AZ-900)

### C++ Level 1 Certification

### DevOps Certification

## SKILLS

Skills 1: Python, Embeddings, GenAI, LLM Integration, Pipelines, APIs, LangChain

Skills 2: AI Tools-Anit Gravity,cursor,Loveable AI, Replit,Co-Pilot

Skills 3: DevOps Tools-Docker, Kubernetes, SonarQube, Ansible, Jenkins, Git, JFrog,

Skills 4: C++, Embedded System, Troubleshooting, Debugging