

# Harsh Pandey

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## SUMMARY

Final-year B.Tech student in Computer Science and Engineering with strong expertise in AI/ML, software development, and fintech applications. Skilled in building data-driven, automated solutions that enhance efficiency and user engagement. Hands-on experience with Retrieval-Augmented Generation (RAG), Large Language Models (LLM), and database management, demonstrated through projects and an SDE internship. Proficient in Python, Java, and SQL, with a proven ability to lead teams and drive projects focused on innovative fintech and healthcare solutions.

## EDUCATION

### Vellore Institute of Technology

B.Tech. Computer Science and Engineering, CGPA: 8.65/10

Coursework: Data Structures and Algorithm, Database Management Systems, Operating Systems, Computer Networks and Security, Cloud Computing, Cyber Security, Artificial Intelligence, Information Security, Software Engineering.

Vellore, Tamil Nadu, India

2021 – 2025

### Doon International School

Class 12, CBSE, Percentage: 84%

Dehradun, Uttarakhand, India

2021

### Doon International School

Class 10, CBSE, Percentage: 95%

Kanpur, Uttar Pradesh, India

2019

## SKILLS

**Languages:** Java, Python, SQL, C & C++

**AI & ML:** Generative AI, Large Language Model, LLMops, RAG, Deep Learning, ML Pipelining

**Web Development:** HTML5 (Beginner), CSS3 (Beginner), JavaScript (Beginner).

**Tools & Frameworks:** Langchain, Flask, TensorFlow, Keras, Scikit-Learn, Streamlit, Spring Boot, Fast API, Rest API.

**Databases:** MongoDB, MySQL, Oracle, Vector Stores

**Version Control:** Git, GitHub

## EXPERIENCE

### Software Development Engineer Intern

Python, Generative AI, SQL, Chatbot

### Logic Information Systems, Bangalore

(May 2024 – June 2024)

- Designed and implemented an automated data retrieval pipeline leveraging Retrieval-Augmented Generation (RAG) for context injection, effectively generating Text-to-SQL queries using LLM.
- Enhanced user experience by integrating pipeline into RASA-based chatbot, automating domain specific data retrieval and database interactions, resulting in 50% faster query processing and eliminating manual DDL execution.
- Tech Stack:** Python, Langchain, Retrieval Augmented Generation, Large Language Models, Vector Stores, RASA
- Certificate:** [Link](#)

## PROJECTS

[Agentify](#) | Python, SQL, LLM, RAG, Langchain, Machine Learning, Pinecone, React.js

[Live Site](#)

- Agentify is an intelligent, multi-agent fintech platform that provides personalized financial advice, real-time stock analysis, and automated loan approval using RAG for recommendations and ML-driven model.
- Implemented RAG-based models for real-time financial advice and dynamic stock analysis, enhancing personalized financial insights and an ML Classification model for efficient, automated loan approval assessments, streamlining credit evaluation processes.

[ChatPDF](#) | Python, SQL, LLM, RAG, Langchain, ChromaDB, Streamlit

[Live Site](#)

- ChatPDF is an innovative document analysis platform that leverages RAG and LLMs to enable natural language interactions with PDF documents, revolutionizing document comprehension and information retrieval efficiency.
- Architected and deployed a RAG-based document intelligence system processing 100+ pages PDFs.
- Implemented chunk optimization and vector similarity search, reducing response time and integrated custom prompt engineering techniques, achieving 50% higher user satisfaction.

- *Emotional Insight* is a real-time emotion recognition platform for educators to analyze student engagement and enhance learning experiences.
- Engineered Custom CNN model with 92% accuracy in detecting 7 distinct emotions.
- Implemented a visualization feature that generates a bar graph displaying the count of each detected emotion, providing actionable insights for educators.

[Xeto](#) | Java, Spring Boot, Rest APIs, MySQL, MongoDB, Google OAuth, React.js

- *Xeto* is a Customer Relationship Management Platform for managing customer data, segmenting audiences, and running personalized campaigns, built with React.js and Spring Boot.
- Developed an advanced customer segmentation feature for dynamic filtering based on spending, visit frequency, and purchase behavior, optimizing targeted marketing and boosting engagement.
- Integrated a campaign management module to track interactions, personalize messages, and capture key analytics.

## CERTIFICATIONS

**AI&ML:** [Artificial Intelligence and Machine Learning Powered by Google Developers- SmartBridge, India](#)

**MERN Stack:** [MERN Full Stack- Ethnus, India](#)

**MathWorks AI&ML:** [Get Started with Artificial Intelligence- MathWorks \(Virtual Internship Program\)](#)

## EXTRACURRICULARS

**Events Head, IEEE TEMS Student Chapter, VIT Vellore**

**2023 - Present**

- Led the planning and execution of various technical and non-technical events, increasing chapter participation and fostering a collaborative learning environment.
- Organized and coordinated workshops and seminars, driving community engagement and enhancing technical skill-building for members.

**Senior Core, Apple's Developer Group, Student Club, VIT Vellore**

**2023 – 2024**

- Actively participated in and conducted workshops and technical events, fostering a collaborative environment and promoting app development best practices.

**Research – Radon emission from flooring and environmental sources**

**2024 – Present**

- Proposed the addition of two specialized filters to modern air filtration systems, enhancing indoor air quality and reducing pollutant exposure to reduce radon, its decay products, and other harmful gases emitted by building materials like tiles in household environments.
- Research paper accepted for patent filing and review by faculty advisor.

## ADDITIONAL INFORMATION

### LeetCode

- Profile: [https://leetcode.com/u/Harshpandey\\_25/](https://leetcode.com/u/Harshpandey_25/)
- Passionate about solving challenging problems on LeetCode to continuously improve my Data Structures and Algorithms skills.

### Hobbies

- Actively exploring and learning about new tech trends and advancements through various blogs and YouTube channels.
- Passionate about visiting new destinations to experience diverse cultures and histories.
- Engaged in playing cricket and football, fostering teamwork and discipline.