# **Aryansh Singh**

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#### SKILLS

Python, JavaScript, HTML and CSS Languages: Frameworks: Bootstrap, NodeJS, React, FastAPI

**Tools/Platforms:** AWS, Docker, GitHub, Linux, Kubernetes, Teraform, MongoDB, PostgreSQL **Soft Skills:** Problem-Solving, Team Player, Project Management, Adaptability, Leadership

## Training

#### **Cipher Schools (Edtech Company)**

Jun' 24 – Jul' 24

Full-Stack Web Development (MERN Stack)

- Built and deployed full-stack web applications using MongoDB, Express.js, React.js, and Node.js, incorporating RESTful APIs and JWT authentication.
- Designed and developed responsive UIs with React. is and integrated MongoDB for efficient data
- Gained experience in version control with Git, and deployment using platforms like Heroku, Render and Netlify.

#### Projects

#### Self-Healing AI Agent with CI/CD Pipeline

Jul' 25

- Built a modular LangChain-based agent with FastAPI that supports prompt retries, fallback logic, and real-time memory injection for auto-healing failed outputs.
- Designed a **feedback-driven learning loop** using vector memory (FAISS) to enhance responses based on user corrections and edge case detection.
- Implemented a self-healing CI/CD pipeline using GitHub Actions with test retries, failure rollback, and zero-downtime deployment on Render.

Tech: FastAPI, LangChain, Gemini 1.5 Flash, FAISS, GitHub Actions, Docker, MongoDB, Render

#### **CodeWhisper: AI-Powered Coding Assistant**

Jun' 25

- Developed "CodeWhisper," a full-stack AI-powered coding assistant with a React is frontend and Flask backend, integrating OpenAI GPT-4 for real-time code generation, explanation, and debugging.
- Implemented LangChain agents for dynamic, multi-turn reasoning and used FAISS vector search to enable Retrieval-Augmented Generation (RAG) with intelligent context retrieval.
- Utilized OpenAI Function Calling to extract structured metadata such as topic and difficulty, combining advanced LLM workflows with robust software engineering practices.

Tech: React.js, Flask, LangChain, OpenAI GPT-4, FAISS, HTML/CSS, Git, REST API

### Natural Language Cross-Platform Data Query RAG Agent

Jun' 25

Jul' 23

- Built a full-stack AI-powered data query system using FastAPI backend and React.js frontend to process natural language questions and retrieve structured insights from PostgreSQL, MongoDB, and document sources.
- Integrated LangChain, Ollama 3, and vector databases (FAISS) to enable Retrieval-Augmented Generation (RAG) and intelligent multi-turn reasoning.
- Implemented modular microservices with support for RESTful APIs, dynamic chart/table rendering, and real-time AI-powered responses for business data queries.

Tech: FastAPI, Python, LangChain, Ollama 3, FAISS, PostgreSQL, MongoDB, React.js, REST API, Git

#### **C**ERTIFICATES

Google Project Management: Professional Certificate	Jul' 25
AWS Solutions Architecture	Sept' 25
Cloud Computing -NPTEL	Nov' 24

# ACHIEVEMENTS

**Smart India Hackathon:** Sept' 24 Developed an education chatbot to provide users with detailed information about colleges in Rajasthan.

**Community Development Project:** Carried out the project for helping voiceless animals under Zariyaan For Voiceless Welfare Society

Education		
•	Lovely Professional University  Bachelor of Technology - Computer Science and Engineering; CGPA: 7.3	Jalandhar, Punjab Aug'22 - Present
•	Sri Guru Harkrishan Public School Intermediate; Percentage: 80%	Kapurthala, Punjab Apr'20 - Mar'22
•	Sri Guru Harkrishan Public School  Matriculation; Percentage: 80%	Kapurthala, Punjab Apr'18 - Mar'20