

# AMANDEEP SINGH

+91-7814986066 | [amandeepsaroa13@gmail.com](mailto:amandeepsaroa13@gmail.com) | [github.com/Amandeepsingh132](https://github.com/Amandeepsingh132) | [linkedin.com/in/amandeepsaroa](https://linkedin.com/in/amandeepsaroa)

## EDUCATION

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**Lovely Professional University**  
*Bachelor of Computer Applications*

2021 – 2024  
Punjab, India

## EXPERIENCE

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### AI Engineer

May 2025 – Present

*ResoluteAI Software*

- **Led** end-to-end ownership of an in-house, multi-domain GenAI product connected to multiple data sources, with full responsibility across architecture, development, and deployment; built GenAI components including **RAG-based document retrieval using advanced RAG techniques** with LangGraph and Azure services.
- **Delivered** end-to-end ownership of a production-grade GenAI system serving **3,000 active users**, featuring a multi-module GenAI pipeline with **agentic Text-to-SQL** and RAG-based document and data retrieval, deployed on Azure using Docker, Container Apps, Azure DevOps, Azure SQL, Cosmos DB, Ragas, and MongoDB.
- **Built, exposed, and integrated** REST APIs to connect ERP systems such as **SAP HANA** and external data sources with the GenAI application, enabling **real-time data access**.
- **Designed and delivered** multiple GenAI and ML POCs, including domain-adapted LLM fine-tuning (LoRA, QLoRA) and end-to-end ML pipelines for sales forecasting with ingestion, training, evaluation, and drift monitoring.

### AI Solution Engineer Intern

Oct 2024 – Apr 2025

*ResoluteAI Software*

- **Fine-tuned YOLO-based** models on custom, domain-specific datasets and implemented OCR pipelines leveraging OpenCV and classical image-processing techniques.
- **Designed and delivered** computer vision POCs, translating business requirements into deployable solutions using object detection, segmentation, and OCR.
- Performed **data annotation**, curation, and quality validation for training datasets, ensuring consistency and improving overall model performance.

## PROJECTS

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### Enterprise AI Legal Contract Intelligence System | *LangGraph, Hybrid RAG (BM25 + Vector), RAGAS, Docker* | [LINK](#)

- **Built** an AI-based legal system to query contracts, review clauses, and generate NDAs and vendor agreements.
- **Designed and implemented** a hybrid RAG backend using BM25 and vector search (FAISS) with structured chunking and template-constrained LLM generation for reliable drafting.
- **Evaluated** the system using RAGAS-based groundedness metrics, achieving **98% retrieval accuracy** and deployed using Azure Services, React, Docker.

### Real-Time Conversational Voice Agent for Customer Support | *Python, STT, TTS, RAG, FastAPI, Langchain, Docker* | [LINK](#)

- **Built** a real-time AI voice agent using **Whisper (STT)**, LLaMA3-7B for reasoning, and **Coqui XTTS** for Text-to-Speech to handle customer support calls.
- **Designed and deployed** a backend **RAG pipeline** using LangChain, Azure services, and local LLaMA3-7B (Ollama) to ground responses in enterprise data with multi-turn context handling.

## TECHNICAL SKILLS

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**Languages:** Python, C/C++, SQL, JavaScript

**Tools:** FastAPI, MySQL, Docker, SQLite, Tableau, N8n, Neo4j

**AI / Deep Learning:** Scikit-learn, Matplotlib, Generative AI, Pandas, NumPy

**Frameworks:** LangChain, LangGraph, CrewAI, Hugging Face, TensorFlow, MLOps

**Databases:** MongoDB, PostgreSQL, FAISS, Azure SQL, Azure Devops, Azure Cloud

**Soft Skills:** Rapport Building, Stakeholder Management, People Management, Cross-Team Communication