

INDERJEET SINGH

MACHINE LEARNING ENGINEER | GENAI ENGINEER

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PROFESSIONAL SUMMARY

Machine Learning Engineer with industry experience in developing Generative AI applications using Python, FastAPI, LangChain, LangGraph, LLMs, and Retrieval-Augmented Generation (RAG). Skilled in building AI-powered chatbots, multi-agent systems, intelligent document retrieval solutions, and scalable backend services. Passionate about developing AI solutions that solve real-world business challenges.

TECHNICAL SKILLS

Programming & Web	Python • C++ • JavaScript • HTML • CSS
AI & Machine Learning	Machine Learning • Deep Learning • NLP • LLMs • Generative AI • RAG • Prompt Engineering
Frameworks & Libraries	FastAPI • LangChain • LangGraph • TensorFlow • Keras • PyTorch • Scikit-learn • Pandas • NumPy
AI Models & APIs	OpenAI API • OpenAI Assistants API • Groq API • Google Gemini API • Hugging Face
Databases & Vector Stores	Qdrant • Chroma • OpenAI Vector Store • MongoDB • MySQL
Developer Tools	Git • GitHub • VS Code • Postman • Swagger • Jupyter Notebook

PROFESSIONAL EXPERIENCE

Shine Design Infonet Pvt. Ltd. – AI Engineer Intern

March 2026 – Present

Project: Aquarelix AI

Enterprise AI Assistant Platform

- Contributed to the development of Aquarelix AI, an enterprise AI assistant platform for intelligent document search and conversational support.
- Developed a RAG-based chatbot using OpenAI Assistants API and OpenAI Vector Store.
- Built FastAPI backend services for document ingestion, chatbot interactions, and AI workflows.
- Implemented session-based conversation history and semantic document retrieval to deliver accurate, context-aware responses from enterprise knowledge bases.

EDUCATION

Bachelor of Computer Applications (BCA)

Govt. College Sec-11, Punjab University Chandigarh

PROFESSIONAL PROJECTS

AI Fitness Coach (Multi-Agent AI System)

[GitHub Repository](#)

Tech Stack: Python, FastAPI, LangGraph, LangChain, Groq API

- Developed an AI-powered fitness planning system using FastAPI and LangGraph with a multi-agent architecture containing Planner and Supervisor Agents.
- Built dynamic workflows for BMI, BMR, TDEE, macro calculation, diet, and workout planning.
- Integrated Groq Llama-3 for personalized fitness recommendations and developed FastAPI backend services for personalized fitness report generation.

Handwriting Recognition & Writer Identification System

[GitHub Repository](#)

Tech Stack: Python, PyTorch, FastAPI, ResNet18, OpenCV, Pillow

- Developed an AI-powered handwriting recognition system using a fine-tuned ResNet18 model for writer identification.
- Built a FastAPI backend for real-time handwriting recognition and writer verification along with image preprocessing and classification pipelines.
- Integrated Groq LLM to validate handwritten inputs before model inference and designed a modular writer verification system using similarity-based handwriting matching.

Task Management API

[GitHub Repository](#)

Tech Stack: Python, FastAPI, SQLAlchemy, MySQL, Alembic, JWT, Uvicorn

- Developed a scalable Task Management API with complete CRUD functionality and a modular backend architecture using SQLAlchemy ORM and Alembic.
- Implemented user registration, login, and JWT-based authentication using secure password hashing.
- Built protected APIs with interactive documentation using Swagger UI.

CERTIFICATIONS

- Kaggle — Python
- Kaggle — Intermediate Machine Learning
- Foundation: Introduction to LangChain (Python)
- Foundation: Introduction to LangGraph (Python)

LANGUAGES

English • Hindi • Punjabi