

Aayushmaan Hooda

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Skills

Languages: Python, JavaScript, Shell Scripting, SQL, NoSQL

Frameworks: Flask, FastAPI, Streamlit, Langchain, LangGraph, CrewAI

Libraries: FastMCP, Numpy, Pandas, Pydantic, Scikit-learn, Matplotlib, boto3

Cloud & Tools: AWS (Bedrock, S3, lambda), Docker, Git, Jira, Postman, PostgreSQL, MongoDB, Figma

Concepts: Deep Agents, Context/Prompt Engineering, GANs, HITL, RAG, MCP Servers, UI/UX Principles

Education

University of New South Wales

Master's in Information Technology

Sydney, NSW, Australia

Sept 2023 – Sept 2025

Maharshi Dayanand University

Bachelor of Computer Science and Engineering

Rohtak, Haryana, India

Sept 2017 – Sept 2021

Experience

Associate Software Engineer

Annalect India

Gurugram, India

Oct 2021 – Sept 2023

- Authored and maintained YAML files for OpenAPI specifications to generate APIs in Apigee.
- Collaborated with the backend team to resolve and improve the YAML file.
- Developed and maintained microservice APIs using Flask, enhancing application scalability and performance.
- Delivered progress updates through regular demo presentations to the US-based team, ensuring alignment and transparency.

Backend Developer Intern

Stoik

Sydney, Australia

Jan 2025 – Jan 2025

- Developed a deep understanding of Docker architecture and FastAPI orchestration to enhance application performance.
- Analyzed and interpreted FastAPI code alongside MongoDB schema to ensure seamless application functionality.

Projects

LangGraph ChatbotApp

[github/chatbot](#) 

- Built a conversational chatbot using LangGraph and LangChain, with a Streamlit frontend for real-time interaction
- Managed conversation state via a ChatState TypedDict and InMemorySaver for checkpointing across sessions.
- Defined a linear StateGraph workflow to orchestrate user messages and AI responses.
- Leveraged session state and thread IDs in Streamlit to maintain isolated, multi-turn dialogue histories.
- **Tools Used:** Python, LangChain, LangGraph, Streamlit

RAG PDF Summarizer

[github/pdf-Summarizer](#) 

- Developed an interactive web application enabling users to upload PDF files (e.g., resumes, reports) and instantly query their content using natural language.
- Process content through LangChain's PDFPlumberLoader Loader
- Constructed an embedding vector using OpenAI's embeddings and leveraged FAISS, a powerful similarity search library, to enable swift and effective retrieval of relevant information.
- Containerized the application with Docker to enable seamless local development, testing, and deployment on any platform.
- **Tools Used:** Python, Langchain, Docker, Streamlit

Leave Manager MCP Server

[github/MCP](#) 

- Designed and developed a robust leave management system using FastMCP and MongoDB, supporting both persistent and in-memory data storage.
- Implemented REST-style MCP tools for applying leaves (with balance checks and date history), employee CRUD, multi-employee batch onboarding, and real-time leave balance and audit queries.
- Designed robust resource endpoints for system status and personalized greetings, with automated sample data seeding and error handling for production reliability.
- **Tools Used:** Python, UV, FastMCP, MongoDB, Claude Desktop

Sydney Property Sales Predictor

[github/Sydney-housing](#) 



- Built a full ML pipeline to predict property sale prices and classify property types using a Sydney housing dataset (train.csv/test.csv).
- Engineered features include temporal (year, month, day-of-week) and domain ratios (bedrooms-to-bathrooms).
- Selected and combined features via correlation analysis to prevent leakage and overfitting.
- **Tools Used:** Python, Pandas, NumPy, scikit-learn, XGBoost, Matplotlib

Travel History RESTful API

[github/travel-history](#) 

- Developed a Flask-RESTX service to store, retrieve, and visualise countries visited, backed by SQLite.
- Integrated the external Countries' GraphQL API to import country metadata (flags, capitals, languages, currencies).
- Created a /countries/visited endpoint that streams a Matplotlib-generated PNG summarising travel history.
- **Tools Used:** Python, Flask-RESTX, SQLite, GraphQL client, Matplotlib, Docker

Certificates

- [AWS Certified Cloud Practitioner, Amazon Web Services \(AWS\)](#) 
- [Deep Agents with LangGraph](#) 
- Python Development Certificate, Udemy
- Flask Development Certificate, Udemy
- FastAPI Development Certificate, Udemy

Professional Summary

Aspiring Software Developer with basic backend development experience using Python, Flask, FastAPI, and SQL. Skilled in building fast, reliable APIs and working with microservices. Currently pursuing a Master's in IT at UNSW, with a solid foundation in algorithms and data structures. Experienced in Agile teams and passionate about solving complex problems efficiently. Quick learner with a strong interest in Generative AI applications, Data Science, and writing high-performance code.