HASSAAN NAUSHAD

AI Engineer | LLMs, RAG, Deep Learning & Mobile Apps

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Portfolio | linkedin.com/in/hassaan-naushad | github.com/hassaan2077

SUMMARY

Computer Science graduate who builds AI-powered applications. Built a multi-document RAG system with LangChain, Milvus and FastAPI, a deep-learning model for MRI image de-blurring, and HealthSync, a mobile hospital app with an LLM chatbot and brain-tumour detection that won 1st position among final-year projects.

EDUCATION

BS Computer Science | **Sir Syed CASE Institute of Technology, Islamabad** Sep 2021 – Jun 2025

Final Year Project: HealthSync, 1st position among final-year projects

EXPERIENCE

AI Application Developer | **Client Project (Remote)** May 2026 – Present

Technical Supervisor: Dr. Yasir Jan, Head of AI Department, SS CASE IT (dr.yasir.jan@gmail.com)

- Develop AI-enabled software by integrating AI features and services into modern, scalable applications.
- Work with APIs, backend services and data workflows; test and optimise features to deliver project milestones.

AI Engineer Intern | **C@re Pvt Ltd (Center of Advanced Research in Engineering), Islamabad** Sep 2025 – Dec 2025

- Developed an AI-powered retrieval system for large document collections and containerized it with **Docker**.
- Worked with APIs, vector databases and backend services; tested the system and improved response accuracy.

Machine Learning Intern | **NESCOM, Islamabad** Aug 2024 – Oct 2024

- Worked on deep learning for medical image restoration: built a model that de-blurs brain MRI images (see Projects).

Frontend Developer Intern | **Codsoft Infotech (Remote)** Aug 2023 – Sep 2023

PROJECTS

HealthSync: AI-Powered Hospital App | **Final Year Project, 1st Position**

React Native, Firebase, Flask, PyTorch, Hugging Face | Website | github.com/hassaan2077/HealthSync-Showcase

- Mobile app for patients, doctors, hospital staff and admins with role-based access, real-time chat with document sharing and video calls.
- **LLM-powered medical chatbot**: Flask backend calling Hugging Face models (Mistral-7B with fallbacks).
- **Brain-tumour detection** with a MobileNetV3-based model (95%+ accuracy), Grad-CAM heatmaps and PDF reports.

Multi-Document RAG System | **AI Engineer Internship, C@re**

Python, LangChain, Milvus, FastAPI, Docker | github.com/hassaan2077/RAG-System-Showcase

- Question-answering system over legal and policy PDFs: documents are chunked, embedded with **e5-large-v2** and stored in **Milvus**.
- Smart document selection (similarity threshold and score gap) uses only relevant documents and rejects unrelated questions.
- Answers generated with **DeepSeek R1** via OpenRouter, served through a **FastAPI** REST API and web chat; Milvus and MinIO run in **Docker**.

MRI Image De-blurring | **Machine Learning Internship, NESCOM**

Python, TensorFlow / Keras | github.com/hassaan2077/MRI-Deblurring-Showcase

- Convolutional autoencoder that takes a blurry brain MRI image and returns a sharper version, trained on 1,474 pairs of clear and blurred scans.
- Used data augmentation, batch normalisation and dropout to avoid overfitting; early stopping kept the best model.

Fuzzy Keyword Matching & Tagging for Pharmaceutical Text | **Client Project**

Python, pandas, RapidFuzz | github.com/hassaan2077/Fuzzy-Keyword-Matching-Showcase

- Tags pharmaceutical publications with topics, products and indications using fuzzy matching and AND/OR keyword logic over Excel/CSV data.
- Pre-filters irrelevant records to reduce manual review time and LLM inference cost.

Dress Domain: Online Clothing Store | Web App

React, React Router, React Context | *Live demo* | *github.com/hassaan2077/Dress-Domain-Showcase*

- Online clothing store with men, women and kids collections, product pages, a shopping cart and login/signup pages.
- Navigation with React Router and cart state shared through React Context.

Titanic: Machine Learning from Disaster | Kaggle Competition

- Ranked in the top 15 out of 15,626 participants in Kaggle's Titanic challenge.
- Built classification models with Logistic Regression and Random Forest, reaching 80%+ accuracy.

SKILLS

Languages	Python, JavaScript, SQL, C++
AI & LLMs	LLMs, RAG, LangChain, Hugging Face, embeddings, prompt engineering, Agentic AI (concepts)
Machine Learning	TensorFlow / Keras, PyTorch, scikit-learn, pandas
Backend & Apps	FastAPI, Flask, REST APIs, React, React Native, Firebase
Databases & Tools	Milvus, MySQL, Docker, Git, GitHub, Google Colab, VS Code