Hilal Aziz

AI Software Engineer Intern

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# Skills

## Programming Language

Python, C++, Dart, Java, Prolog

## Database

SQL

## Scripting Language

Bash

## Machine Learning Framework

TensorFlow, PyTorch, LangChain

## Machine Learning Library

Scikit-learn

## Natural Language Processing Library

NLTK, SpaCy

## Web Framework

Flask

## Computer Vision Library

OpenCV

## Version Control System

Git

## Database Management System

MySQL

## Business Intelligence Tool

PowerBI

## Cloud Computing Platform

AWS, GCP

## Operating System

Linux

## Machine Learning Concept

LSTM, RAG, NLP, Time Series Forecasting, Recommender Systems, Knowledge Graphs

# Education

**Bachelor of Science in Artificial Intelligence - FAST National University of Computer and Emerging Sciences** *(2022-08-01 - 2026-08-01)*, Karachi, Pakistan

* Courses: Operating Systems, Algorithms, Data Structures, Artificial Intelligence, Machine Learning, Deep Learning, NLP, CV, Recommender Systems, Databases, Networking

**FSc - Computer Science - Cadet College Petaro** *(2017-05-01 - 2022-06-01)*, Sindh, Pakistan

# Experience

**AI Software Engineer Intern at Wellness Innovation, LLC** *(2025-03-01 - Present)*, Remote

* Enhanced AI agents using ontologies, RAG pipelines, and knowledge graphs for code reasoning and understanding
* Built a GenAI-powered Database Agent that performs user prompt interpretation, competitive DB analysis, ERD/BDS generation, auto-schema + procedure creation (CRUD), and logs publishing to GCP Pub/Sub

**Data Science Mentor - Fintech and AI at N/A** *(2024-09-01 - Present)*, Karachi, Pakistan

* Mentored students in building ML pipelines, financial prediction models, Data-Science, and real-world AI projects

# Projects

**Stock Price Predictor (PSX)**

Scraped the entire Pakistan Stock Exchange, engineered financial features, and built LSTM-based models for price forecasting

* Technologies: LSTM, Python

**Multi-Domain Recommender Systems**

Built four systems for books, movies, music (Spotify), and images using collaborative filtering, hybrid models, and computer vision techniques

* Technologies: Collaborative Filtering, Hybrid Models, Computer Vision

**QA Chatbot (LangChain + Watsonx)**

RAG-based chatbot with Watsonx embeddings, FaissDB retrieval, and dynamic context windowing

* Technologies: LangChain, Watsonx, FaissDB

**Semantic Text Classifier (RDF Ontology)**

Used RDF Turtle and SentenceTransformer embeddings to classify religion-related subreddit posts based on semantic and hierarchical relationships

* Technologies: RDF Turtle, SentenceTransformer

**Finance-Aware Web Crawler**

Built a crawler for finance news that stores articles in a DB and decomposes user queries into sub-queries to return highly relevant contextual results

* Technologies: Python, Database

**Exploratory AI Portfolio**

Worked with 100+ real-world datasets across domains including health, retail, finance, NLP, and CV

* Technologies: Python, Machine Learning

# Certifications

**AWS: Cloud Support Associate** - AWS

**AWS: Serverless Apps in Python** - AWS

**AWS: Cloud Essentials** - AWS

**AWS: Storage** - AWS

**AWS: Compute** - AWS

**AWS: Automation** - AWS

**IBM: Applied Data Science Capstone** - IBM

**IBM: Generative AI with RAG** - IBM

**IBM: Databases + SQL** - IBM

**Coursera/NYIF: ML for Trading** - Coursera/NYIF

**Coursera/NYIF: Using ML in Finance** - Coursera/NYIF

**Coursera/NYIF: GenAI Summarization with LangChain** - Coursera/NYIF

**LangChain.js (Scrimba)** - Scrimba

**Supervised ML (DeepLearning.AI)** - DeepLearning.AI

**Modeling in AWS (Whizlabs)** - Whizlabs

# Languages

* English