Waris Hayat

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Education

Numl University - Present   Islamabad, PK
BS-Software Engineering, GPA [3.01 out of 4.0 GPA]   Graduation Date: 02-2026
Relevant Coursework: DSA, OOP (C++, Java, Python), Statistics & Mathematics, Machine Learning, System Design

Punjab College   Islamabad, PK
ICS, Computer Science. GPA [710/1100 – 64%]   Graduation Date: 03-2020
Relevant Coursework: Object-Oriented Programming (C++, Mathematics)

Experience

NERD FLOW

Junior AI Engineer - Present (On-site)   Islamabad, March 2025
- Developed NLP models to enhance language understanding and extract meaningful insights from text data.
- Built RAG applications for efficient information retrieval and implemented multimodal prompting techniques to improve AI interactions.
- Designed and optimized backend infrastructure to support scalable and high-performance AI solutions.
- Researched and developed AI agents for process automation, decision-making, and knowledge engineering.

ARTIFICIZEN

AI/ML Engineer - Internship (Remote)   Sheridan, Feb-2025 - March-2025
- Developed NLP-powered chatbots with advanced language understanding and interaction capabilities.
- Built Retrieval-Augmented Generation (RAG) applications for enhanced information retrieval and response generation.
- Created agentic AI systems to automate tasks and streamline intelligent workflows.
- Integrated cutting-edge AI technologies to develop scalable and high-performance solutions.

Projects

Multimodal Retrieval-Augmented Generation (RAG) System
- Developed a Fast API-based RAG system to process multimodal data (PDFs, YouTube videos, WhatsApp chats, Excel files).
- Implemented embedding generation, text chunking, and vector storage in Pinecone for efficient retrieval.
- Built a retrieval-based chatbot for querying stored knowledge with context-aware responses.
- Designed robust data preprocessing pipelines using pdfplumber, Pandas etc.

Multi-Agent State-Driven Chatbot
- Developed a state-driven chatbot framework using a DAG for dynamic conversation management and tool integration.
- Implemented context-aware LLM-based responses that adapt in real-time to user inputs.
- Built a flexible state graph with Mermaid visualization for clear architecture insights.
- Enabled interactive tool interaction via IPython, enhancing chatbot functionalities in Jupyter Notebooks.

Qlora-Peft-LLMs-Prompt-Generation
- Built a prompt generation system using Qlora and PEFT with TinyLlama, optimized for efficient computation.
- Enabled model training and execution in Kaggle and Google Colab for accessibility.
- Integrated TensorBoard for real-time performance monitoring.
- Optimized memory and efficiency using BitsAndBytesConfig (8-bit precision).

Leadership & Activities

Microsoft   Remote
Campus Ambassador   USA - (2023-24)
- Organized technical events to promote Microsoft technologies and student learning.
- Supported Microsoft Learn initiatives, guiding students with resources and skill development.
- Represented Microsoft in student forums, sharing insights on Power Platform and GitHub.

Devsinc   Hybrid
Campus Ambassador   Islamabad - (2025-26)
- Act as a bridge between Devsinc and the campus, fostering collaboration and engagement.
- Organize technical events and workshops to promote Devsinc's initiatives among students.
- Represent Devsinc on campus, creating awareness and networking opportunities.

Skills & Interests

Languages: Python, Java, JavaScript C++, HTML/CSS, Bootstrap
Data Analysis: NumPy, Pandas, SQL, Excel.
Visualization: Matplotlib, Seaborn, Plotly.
Machine Learning: TensorFlow, Keras, Scikit-learn, PyTorch, Transfer Learning, LLm's, LangChain, LangGraph,Crewai.
NLP: NLTK, Hugging Face, SpaCy.
Web Frameworks: FastAPI (REST APIs), Streamlit, and basic React.js.
Tools: Docker,Scrum, Git/GitHub.
IDEs: PyCharm, Google Colab, VS Code, Cursor, Jupyter Notebook,Replit.
Language: English, Urdu, Punjabi.
Interests: Interested in Data Science and AI, exploring machine learning algorithms, working on real-world AI projects, attending tech meetups, and contributing to AI open-source projects.