Mohammad Shaharyar Ahsan

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Education

Lahore University Of Management Sciences (LUMS) — Lahore, Pakistan
***B.S. Computer Science**, Current GPA: 3.80, Major GPA: 3.89* — *Sept. 2021 – Present*

Lahore Grammar School - Johar Town (LGS JT) — Lahore, Pakistan
***GCSE A Levels**, 3A* 1A, SAT 1580* — *Sept. 2019 – Jun 2021*

Awards

Dean's Honor List — LUMS

- Academic Year 2022-2023 and 2023-2024
- Yearly award given to students with a GPA greater than 3.6

Outstanding Cambridge Learner Award - Literature in English — June 2019

- Awarded to high achievers on a regional level

Work Experience

Teaching Assistant — Suleman Dawood School of Business — Sept. 2024 – Dec. 2024
Course: MGMT 348: Internet Governance and Technology Policy — *LUMS*

- Marked qualitative CP in weekly sessions (2x weekly), as well as offered feedback on how to improve for struggling students
- Helped create, invigilate and check quizzes, exams, and in-class writing assignments, offering constructive criticism during contestations.
- Managed logistics for presentations, including resolving scheduling conflicts and auditorium bookings.
- Held regular office hours to provide feedback and support for students.
- Assisted with grading using a database join system to streamline data entry on the LUMS portal.

Teaching Assistant — Mushtaq Ahmad Gurmani School of Humanities and Social Sciences — Sept. 2023 – Dec. 2023
Course: SS 100: Writing and Communication — *LUMS*

- Tracked attendance and class participation in weekly sessions.
- Graded course components, including presentations, quizzes, and writing assignments, providing detailed feedback.
- Conducted three sessions on academic research and citation formatting, as well as individualized seminars for final essay preparation.
- Held weekly office hours to guide struggling students and resolve contestations.

Projects

Portal-LLM: Character-based Vicarious Learning through Chatbots — Sept 2024 – Dec 2024
Project Repository — *LUMS*

- Identified a lack of interest in traditional reading practices and reviewed literature to understand student disengagement from long-form narratives in education
- Designed a system to simulate vicarious learning from fictional characters via Telegram chatbot, leveraging LLMs to make learning more appealing to younger audiences
- Built a RAG pipeline integrating Pinecone for vector storage and a custom web retriever to enhance contextual grounding from both uploaded and live web content
- Implemented a dual-path LLM QA system that classifies user input into 'code-switching' (to change characters) and 'question-answering', enabling character-specific replies
- Evaluated Gemini 1.5 Flash, Gemini 2.0 Experimental, and LearnLM 1.5 models for educational accuracy and latency across different prompt types
- Compared Google embedding techniques and tested retrieval accuracy using a Harry Potter trivia dataset, achieving 83% accuracy in the best-case scenario

Technology Used: Python, LangChain, Telegram API, Pinecone, Google AI (Gemini 1.5/2.0, LearnLM 1.5)

Coursework & Interests

Relevant Coursework: Data Structures, Algorithms, Operating Systems, Advanced Programming, Software Engineering, Internet of Things, Topics in Large Language Models, Machine Learning, Artificial Intelligence, Data Science, Generative AI

Interests: Music, Creative Writing, English Literature, Digital Humanities