

# Aman Shahzad

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## Professional Summary

Highly motivated Bachelor of Science in Computer Science student with a 3.48 CGPA and hands-on experience in **full-stack development, DevOps, and generative AI**. Proficient in Docker, Kubernetes, Terraform, and CI/CD pipelines, with a strong foundation in generative AI and large language models (LLMs), including fine-tuning deep learning architectures such as RNNs, LSTMs, and Transformers. Passionate about developing scalable, high-performance applications and contributing to AI-driven solutions. Demonstrates strong problem-solving abilities, a commitment to writing high-quality code, and a keen focus on creating intuitive and responsive user interfaces. Additionally, possesses leadership and teaching experience, emphasizing collaboration, mentorship, and project management. Eager to leverage technical expertise and innovative thinking to contribute to the fast-paced tech industry and drive meaningful advancements.

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## Education

### BS in Computer Science

FAST-NUCES (CFD Campus)

08/2021 - Present | CGPA: 3.48

### FSc (Pre-Engineering)

Punjab College of Science, Faisalabad

08/2019 - 02/2021 | Marks: 1055/1100

### Matriculation

La Salle High School, Faisalabad

06/2017 - 05/2019 | Marks: 998/1100

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## Experience

### Internship (MERN Stack Development)

Shopilam 07/2024 – 11/2024

- Collaborated in the development of full-stack web applications using MongoDB, Express.js, React.js, and Node.js.
- Built and optimized RESTful APIs for seamless communication between frontend and backend systems.
- Enhanced user experience by designing and implementing responsive and interactive user interfaces.
- Participated in code reviews, debugging, and performance optimization to ensure application efficiency.
- Worked closely with a team to deliver high-quality solutions within deadlines.

## Internship (Front-end Development)

Interns Pakistan 06/2024 – 08/2024

- Designed and developed responsive user interfaces using HTML, CSS, and JavaScript.
- Created and managed websites using WordPress, customizing themes and plugins for client requirements.
- Collaborated with backend teams to integrate dynamic content and ensure seamless functionality.
- Focused on delivering visually appealing designs while maintaining responsive and user-friendly layouts.

## Teaching Assistant

FAST-NUCES 01/2024 – Present | 09/2024 – 01/2025 | 02/2024 – 06/2024

- Currently assisting for the course Information Security.
- Assisted in the Computer Networks course, supervising 51 students.
- Assisted in the Data Structures and Algorithms course, supervising 30 students.
- Responsible for designing and creating assignments and quizzes. Moreover, conducting viva for the assignments and projects is also one of my responsibilities.
- **Contact:** [Dr. Anwar Shah](#) | [Dr. Umar Aftab](#)

## Usher (Job Fair)

FAST-NUCES | 04/2023 - 04/2024

- Awarded Best Usher 2024.
- Coordinated volunteer duties and ensured smooth event operations.

## Chief Prefect

La Salle High School | 04/2020 - 03/2021

- Selected from a batch of 500 students for leadership excellence.
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## Skills

- **Programming Languages:** C++, C#, HTML, CSS, JavaScript, TypeScript, Python, Bash Scripting
  - **Frameworks, Libraries & Tools:** React.js, Next.js, Node.js, Express.js, MongoDB, PostgreSQL, Bootstrap, WordPress
  - **Tools and Platforms:** Figma, Github, Visual Studio, VS Code, Cisco Packet Tracer
  - **DevOps Tools:** Docker, Kubernetes, Terraform
  - **Generative AI & LLMs:** Familiar with deep learning models (RNN, LSTM, Transformers) and their applications. Experience in fine-tuning LLMs like GPT and LLaMA models.
  - **Soft Skills:** Project Management, Leadership, Communication, Problem Solving, Mathematics.
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## Projects

**IELTS Mastery Learning Platform** (Final Year Project) | 09/2024 - Present

- Front-end development using Next JS
- Back-end development using Node JS, Python
- Database: PostgreSQL

- Description: Developing an advanced IELTS preparation platform with a personalized dashboard and generative AI tools for real-time writing and speaking feedback.

#### **Clinical Diagnosis RAG System | 04/2025**

- Built a Retrieval-Augmented Generation (RAG) pipeline for medical QA using FAISS, LangChain, and Groq's Llama-3-70B.
- Tools: Python, HuggingFace (Bio\_ClinicalBERT), FAISS, Streamlit, LangChain, Groq API.
- Description: Developed an AI system that retrieves and synthesizes diagnostic insights from clinical guidelines and patient cases.

#### **Roman Urdu Poetry Generator | 02/2025**

- Deep learning-based poetry generation using LSTM in PyTorch.
- Tools: Python, PyTorch, Streamlit, Google Colab
- Description: Developed an AI-powered poetry generator that creates structured Roman Urdu poetry using a word-level LSTM model. Implemented data preprocessing, tokenization, and text generation techniques, and deployed an interactive Streamlit web app for user-friendly poetry generation.

#### **YouTube Video Summarizer | 02/2025**

- AI-driven summarization of YouTube videos using Whisper and Llama 2.
- Tools: Python, Haystack, Whisper, Llama 2, Streamlit, yt-dlp.
- Description: Developed an AI-powered application that transcribes and summarizes YouTube videos using Whisper for speech-to-text conversion and Llama 2 for natural language summarization. Integrated Haystack's pipeline for efficient processing and deployed an interactive Streamlit-based UI for seamless user experience.

#### **Pseudocode to C++ Converter | 03/2025**

- Transformer-based Seq2Seq model for converting pseudocode into C++ code.
- Tools: Python, PyTorch, Streamlit, Google Colab
- Description: Developed a deep learning model from scratch using a Transformer architecture to translate pseudocode into C++ code. Implemented dataset preprocessing, tokenization, model training, and inference. Deployed an interactive Streamlit web app for real-time pseudocode conversion.

#### **Student Management System | 04/2023**

- Designed a Windows Forms application for managing student records using C# and Oracle DB.

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## **Certifications**

- Teacher's Assistant Certificate (2024, 2025)
- Dean's List Certificates (2023, 2024)
- Best Usher 2024 (Job Fair)
- Certificate of Student Excellence, Punjab College

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## **Interests**

- Basketball
- Driving
- Music