

MUHAMMAD AITAZAZ AHSAN

SOFTWARE ENGINEER

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PROFILE

Motivated Software Engineering student at NUST with a strong aptitude for problem-solving and a keen interest in web and AI development. Actively enhancing technical skills through hands-on projects and eager to connect, collaborate, and gain industry experience through internships.

PROFESSIONAL EXPERIENCE

IT Intern, Special Communication Organization

Rawalpindi

Gained practical exposure to telecom operations, including media transmission, billing systems, optical fiber networks, IT and R&D processes, customer care and call center operations, as well as CDMA technology, enhancing understanding of communication infrastructure and services

AI Enhanced Full Stack Web Developer Intern, Nexium Ltd

Jun 2025 to Jul 2025

Developed several AI-powered web applications using Next.js and N8N for workflow automation. Key projects included an AI Blog Summarizer, a Recipe Generator, and a Quote Generator, enhancing my skills in full-stack development and API integration.

Web Developer Intern, Khuda Hafiz (Startup)

Jul 2025 to Aug 2025

Islamabad

As a Full Stack Intern at Khuda Hafiz, | contributed to the end-to-end

development of the company's website and app. | implemented

new features, improved the UI, and maintained the backend, gaining valuable experience in a fast-paced startup environmen

EDUCATION

NUST

Oct 2023 to Oct 2027

BE SOFTWARE ENGINEERING

Currently in 6th semester with a CGPA of 3.81/4, pursuing a strong foundation in software development, systems design, and emerging technologies. Relevant Coursework: OOP , FOP, Machine Learning, Deep Learning, Software Engineering , Software Construction, DSA , DBMS, OS

AREAS OF EXPERTISE

- Web Development (HTML, CSS, JS, React/Next Node JS)
- DBMS (MySQL, MongoDB)
- Team Work
- C++ (OOP, DSA)
- Communication
- AI Automation
- Java (OOP)
- Time Management
- N8N Automation
- JavaScript
- Problem Solving
- Machine & Deep Learning

LANGUAGES

Urdu, English

PROJECTS

Tetris Game

Developed a classic Tetris game in 1st semester using C++ and SFML

Hotel & Restaurant Management System

Developed using Java, Java Swing, and MySQL for database

Quiz App

Developed a Java-based Quiz App integrating an API to fetch and display questions dynamically.

LinkedIn Post Generation and Website Generator N8N Automation

AI-powered automations using n8n, streamlining post creation and website building with minimal manual effort.

Kaawish Website

Developed the official website for 'Kaawish,' a non-profit organization dedicated to community uplift, educational support, etc. The platform was built to enhance their online presence, engage with supporters, and effectively showcase their mission-driven efforts.

Parkintel - Instracity Smart Parking Management System

Built a smart parking platform that simplifies slot discovery and navigation. Leveraged NEXT JS and GOOGLE MAP API for a responsive UI, while utilizing SUPABASE for real-time data handling and GOOGLE AUTH for secure, one-click logins.

AlphaSite

Developed AlphaSite, an autonomous AI-powered platform that generates and deploys fully functional Next.js websites with a single command. Engineered a robust n8n backend to orchestrate the entire lifecycle, automating everything from code generation and CI/CD-pipelining to final DNS configuration and live deployment.

EventEase - Smart Event Booking and Planning

Developing EventEase, a comprehensive event planning platform bridging the gap between customers and vendors. The system features dedicated dashboards for managing bookings, checklists, and service packages, integrated with real-time messaging and a modern 'Vibrant Elegance' UI. (Currently in Progress)

Music Similarity & Recommendation Engine via Mutual Information

Developed a high-accuracy recommendation system using the MagnaTagATune dataset by implementing advanced **Mutual Information (MI)** estimators like **KSG** and **KDE**. Optimized spectral audio features using **PCA** dimensionality reduction and conducted extensive **Grid Search** and **Leave-One-Out** validation to achieve a peak benchmark accuracy of **86.98%**.

AI-Powered HDFS Log Anomaly Detector

Developed a deep learning anomaly detection pipeline using a fine-tuned **DistilBERT** model to analyze complex temporal and sequential log patterns. Successfully handled a massive 33:1 class imbalance using weighted loss optimization to achieve a **96.5% F1 score**, and implemented token-level explainability to automatically highlight the root causes of detected system threats.

AWARDS

Award of Excellence - Regional Academic Distinction (2nd Position)