

SHAHZEB FAISAL

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Summary

Passionate Data Science student with comprehensive expertise in **Machine Learning, Full-Stack Web Development, Blockchain**, and **AI/NLP**. Proven track record through **3 internships** and **16+ production-ready projects**. Skilled in building AI-powered applications, predictive models, and scalable systems. Currently conducting research on LLM-based conversational chatbots at FAST NUCES. Seeking opportunities to leverage data-driven solutions and cutting-edge technologies.

Education

FAST NUCES, Lahore Campus

2021 – Expected 2025

Bachelor's in Data Science

- Research Assistant under Dr. Esha Tur Razia Babar
- Focus: Machine Learning, Deep Learning, NLP, Big Data Analytics

Punjab Group of Colleges

2019 – 2021

Intermediate in Computer Science (ICS)

Technical Skills

Programming Languages: Python, JavaScript, TypeScript, C++, C, SQL, Java, Solidity

Machine Learning & AI: TensorFlow, PyTorch, Scikit-Learn, LSTM, Transformers, Hugging Face, OpenAI GPT-4, NLTK, Computer Vision

Web Development: Next.js 15, React, Node.js, Express.js, Tailwind CSS, ShadCN UI, REST APIs, WebSocket

Data Science: Predictive Modeling, Data Visualization, Big Data, Pandas, NumPy, Matplotlib, Seaborn, Plotly

Databases: MS SQL Server, MongoDB, PostgreSQL, Supabase, MySQL, Prisma ORM

Cloud & DevOps: Azure Cloud, AKS, Bicep (IaC), Vercel, Docker, Git, Azure CLI

Blockchain: Solidity, Web3.js, Smart Contracts, Truffle, Ganache, Ethereum

Professional Experience

AI-First Web Development Intern

2025

Nexium

- Developed **AI-powered Resume Tailor** platform with smart parsing, ATS optimization, and job matching algorithms using Next.js 15 and OpenAI GPT-4
- Built **Blog Summarizer** with web scraping, NLP summarization, and Urdu translation using dual database architecture (Supabase + MongoDB)
- Created **QuoteGen AI** with server-side rendering and WCAG 2.1 AA accessibility compliance
- Implemented responsive UI/UX with Tailwind CSS, ShadCN UI, and Progressive Web App features

Research Assistant

2024 – Present

FAST NUCES Lahore

- Conducting research on **"Exploring Publicly Available LLMs for Conversational Chatbots"** under Dr. Esha Tur Razia Babar
- Exploring persona-based chatbot architectures and bias mitigation strategies in LLM systems
- Investigating real-world applications and ethical challenges in LLM-driven conversations

Data Science Intern

2024

CodeAlpha

- Developed predictive models for business intelligence, improving decision-making accuracy by **25%**
- Designed automated data analysis pipelines, reducing processing time by **30%**
- Applied SQL and machine learning algorithms to extract actionable insights from large datasets
- **Certification:** Recognized for expertise in predictive modeling and data analytics

Data & Software Intern

2024

Kashf Foundation

- Built compliance system dashboard with real-time analytics and data monitoring
- Optimized SQL queries and database schema, reducing response time by **40%**
- Enhanced Android mobile app UI/UX, improving user engagement and satisfaction
- **Certification:** Dashboard development, app UI, and SQL databases

Featured Projects

Nexium Resume Tailor <i>Next.js 15, TypeScript, OpenAI GPT-4, Supabase, PWA</i> <ul style="list-style-type: none">AI-powered resume optimization platform with smart parsing, ATS optimization, and job matching using NLPReal-time editing, version control, and cover letter generation with PWA offline capability	2025
Blog Summarizer <i>Next.js 15, MongoDB, Supabase, Prisma, Cheerio</i> <ul style="list-style-type: none">Full-stack AI web app with web scraping, NLP summarization, and Urdu translationDual database architecture for structured and unstructured data with glassmorphism UI	2025
Environmental Impact Analysis <i>Python, Satellite Data, NDVI, Jupyter</i> <ul style="list-style-type: none">Analyzed satellite imagery to monitor deforestation and urban sprawl using NDVI indicesVisualized land cover changes for environmental decision-making with spectral analysis	2024
Lahore Smart City Management <i>Python, Pandas, NumPy, OpenWeatherMap API</i> <ul style="list-style-type: none">Real-time data pipeline processing 13.5M+ vehicle registrations with 98.75% quality scoreWeather integration and traffic safety analytics with synthetic data generation	2025
Election DApp <i>Solidity, Blockchain, Web3.js, Truffle, Ganache</i> <ul style="list-style-type: none">Decentralized voting application on Ethereum blockchain with transparent smart contracts	2025
Edu Connect <i>React, Node.js, MySQL, WebSocket, Express</i> <ul style="list-style-type: none">Full-stack platform connecting students with tutors featuring real-time WebSocket chat	2024
Image Captioning with LSTM <i>Python, TensorFlow, Keras, LSTM</i> <ul style="list-style-type: none">Deep learning model generating descriptive captions, achieved 0.875 BLEU score	2024
Music Sentiment Analysis <i>Python, NLP, Machine Learning</i> <ul style="list-style-type: none">Analyzed song lyrics sentiment across different music eras using NLP and ML algorithms	2024

Certifications

- CodeAlpha Internship Certificate (2024) – Predictive Modeling & Data Analysis
- Kashf Foundation Internship Certificate (2024) – Dashboard Development & SQL Databases

Key Strengths

- Technical Proficiency:** Expert in Python, JavaScript/TypeScript, SQL, ML, and Cloud Computing
- Full-Stack Development:** End-to-end application development from database to deployment
- AI/ML Expertise:** Deep learning, NLP, LLMs, and computer vision
- Problem-Solving:** Complex real-world data-driven challenges
- Research Experience:** Cutting-edge LLM and conversational AI technologies

16+ Production-Ready Projects | 3 Professional Internships | Active GitHub Contributor