Roha Arslan

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📍 **Home:** Jubilee Town, Canal Road, 54000 Lahore (Pakistan)

WORK EXPERIENCE

🏢 *DWP Group* – Lahore, Pakistan

Trainee Software Engineer

[05/05/2025 – Current]

- Developed full-stack enterprise applications for AI-powered and multi-tenant products, including frontend, backend, and RESTful API integration
- Tested and debugged complex workflows, ensuring smooth user experience and reliable system performance
- Created technical documentation, prototypes, and flowcharts for multi-tenant HR application features
- Implemented responsive UI/UX enhancements using React and CSS frameworks Researched and integrated third-party APIs to extend application capabilities

🏢 *Tech Cynosure* – Remote, Pakistan

Junior Python Developer

[01/12/2024 – 31/05/2025]

- Built modular AI voice assistant for hotel management with online/offline modes, adaptable for kiosks and smart terminals
- Designed dynamic API engine with centralized brain configuration to avoid hardcoded logic and support flexible workflows
- Integrated multiple lightweight LLMs (GPT-2, GPT-Neo, BLOOM) and tested for speed, accuracy, and structured output (JSON)
- Implemented AIML fallback for basic offline interactions and ensured persistent user intent handling in multi-step conversations
- Enabled natural voice interaction using faster-whisper (speech-to-text) and eSpeak (text-to-speech)
- Developed API synchronization tool connecting QuickBooks Online and OrderTime platforms for automated data flow Built backend endpoints with custom service layers, polling workers, and job schedulers for real-time data synchronization
- Integrated financial workflows by syncing payment details from QuickBooks to OrderTime

🏢 *SKMCH&RC* – Lahore, Pakistan

Biomedical Engineering Intern

[01/07/2024 – 01/08/2024]

- Gained hands-on experience with medical equipment including ECG machines, patient monitors, and diagnostic modules
- Performed analysis, calibration, and validation of medical devices
- Worked on customized temperature and humidity monitoring device

🏢 *Upwork/Local Clients* – Remote, Pakistan

Freelance Technical Writer

[01/05/2023 – 31/03/2025]

- Produced high-quality technical articles on Machine Learning, AI, and software engineering topics for diverse clients
- Crafted engaging content making complex technical concepts accessible to broad audiences
- Demonstrated SEO optimization skills for improved visibility and reach
- Conducted in-depth research ensuring accuracy and value, collaborating with editors to maintain publication standards

EDUCATION AND TRAINING

Bachelor of Science in Software Engineering
COMSATS University Islamabad [20/09/2021 – 15/07/2025]

City: Lahore | **Country:** Pakistan | **Final grade:** CGPA: 3.29/4.0 (German Grade: 2.0) | **Level in EQF:** EQF level 6

Relevant Coursework: Machine Learning, Artificial Intelligence, Computer Vision, Data Structures and Algorithms, Database Systems, Object-Oriented Programming, Data Warehousing and Mining, Numerical Computing, Statistics and Probability Theory, Multivariable Calculus, Operating Systems, Computer Networks

Intermediate in Computer Science
Kinnaird College for Women [01/09/2019 – 01/07/2021]

City: Lahore | **Country:** Pakistan | **Final grade:** Grade: A | **Level in EQF:** EQF level 4

Matriculation
Divisional Public School [03/03/2018 – 05/07/2019]

City: Lahore | **Country:** Pakistan | **Final grade:** Grade: A | **Level in EQF:** EQF level 2

PROJECTS

[01/01/2024 – 15/07/2025]
AROUQ Blood Donation App Technologies: React Native, Redux, Firebase, Google Maps API, MongoDB, JWT Authentication
- Developed full-stack mobile application connecting blood donors and recipients in real-time
- Implemented location-based donor matching, JWT authentication, and real-time notifications
- Created in-app chat feature for seamless coordination between donors and recipients
- Proposed extensions including hospital integration, emergency alerts, and iOS optimization

Neo4j-Backed Conversational Chatbot Technologies: Python, Neo4j, LangChain, RAG
- Built intelligent chatbot leveraging knowledge graphs for context-aware conversations
- Implemented Retrieval-Augmented Generation (RAG) pipeline using LangChain
- Designed graph data model with Cypher queries for efficient relationship traversal

Handwritten Digit Recognizer (Python, TensorFlow) – CNN achieving 97% accuracy on MNIST dataset

Hospital Management System (Java, MySQL, Figma) – Patient registration, appointments, and billing

Pacman Reflex-Based Agent (Python) – AI agent using reflex-based decision making

Practice Responsive Web Application (React, CSS, JavaScript) – Multi-page responsive website

Simpletron Simulator (C) – Assembly-like language simulator

CERTIFICATIONS

[Simplilearn, 01/01/2026]
n8n No-Code AI Agent Builder Workflow automation, API integration, multi-step workflows, Docker-based self hosting

[Kamyab Jawan Programme , 31/08/2025]
Machine Learning, AI & Data Science

[Neo4J, 01/04/2025]
Build a Neo4j-Backed Chatbot using Python Knowledge graphs, Neo4j Python driver, LangChain, RAG, LLM-powered systems

[Neo4J, 01/04/2025]
Cypher Fundamentals

[Neo4J, 01/04/2025]
Neo4j Fundamentals

[freeCodeCamp, 01/11/2023]
Responsive Web Design

[L'Oréal Brandstorm Competition, 31/01/2025]
Certificate of Recognition

SKILLS

Programming Languages

Python / JavaScript / Java / C++ / C / SQL

Web Technologies

HTML / CSS / React / Node.js / RESTful APIs / Django

AI/ML Frameworks

TenserFlow / LangChain / RAG / LLMs (GPT-2, GPT-Neo, BLOOM)

Databases

MySQL / Neo4J / NoSQL (MongoDB Neo4J Redis) / MongoDB / Firebase

Tools & Platforms

Docker / Github / n8n / Figma / Balsamiq / Git

Specializations

Workflow Automation / API Integration / Knowledge Graphs / Cypher Query Language / Full-Stack Development / Graph Data Modeling

Concepts

Computer Vision / Artificial Intelligence / Machine Learning / Operating Systems / Data Structures & Algorithms / Object-Oriented Programming / OOP

LANGUAGE SKILLS

Mother tongue(s): Urdu

Other language(s):

English
LISTENING C2 **READING** C2 **WRITING** C1
SPOKEN PRODUCTION C1 **SPOKEN INTERACTION** C1

German
LISTENING A1 **READING** A1 **WRITING** A1
SPOKEN PRODUCTION A1 **SPOKEN INTERACTION** A1

French
LISTENING A1 **READING** A1 **WRITING** A1
SPOKEN PRODUCTION A1 **SPOKEN INTERACTION** A1

LEADERSHIP AND EXTRACURRICULAR ACTIVITIES

[01/10/2022 – 28/02/2023]
Deputy Director - Content Writing - Google Developer Student Club (GDSC), COMSATS University

- Led content strategy and managed team producing technical and educational articles
- Mentored writers, promoted tech literacy, and encouraged engagement with emerging technologies

[01/04/2023 – 31/07/2024]
Media and Publications Officer COMSATS Lahore Debating Society

- Managed digital presence through website, newsletter, and social media content
- Designed event marketing materials, increasing workshop participation and audience reach

ADDITIONAL INFORMATION

Academic Credits

240 ECTS-equivalent credits in Computer Science and Software Engineering

Uni-Assist Grade Conversion

German Grade 2.0 (on 1.0-4.0 scale)

Key Strengths

Full-stack development, AI/ML integration, API design, technical documentation, cross-functional collaboration

Interests

Artificial Intelligence, Natural Language Processing, Knowledge Graphs, Automation, Graph Databases

Academic Credits

240 ECTS-equivalent credits in Computer Science and Software Engineering

Uni-Assist Grade Conversion

German Grade 2.0 (on 1.0-4.0 scale)