

AQEEL FEROZE

Data Center Strategy | Design | Operations Expert
Cloud Applied Generative AI Engineer
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PROFESSIONAL SUMMARY:

Innovative and results-driven Data Center Strategy, Design, and Operations Expert with over 24 years of leadership in enterprise-scale digital transformation, data center modernization, and public sector MIS development. Demonstrated success in architecting and optimizing resilient, scalable IT/Data Center infrastructures that reduce operational costs, ensure high availability, and improve service delivery. Skilled in aligning Data Center and IT strategy with organizational objectives to drive efficiency, performance, and long-term value across complex, government-led MIS ecosystems.

OBJECTIVE:

To lead innovative digital transformation initiatives that optimize governance and create measurable social impact through technology.

KEY SKILLS & COMPETENCIES

➤ **Data Center Infrastructure Strategy & Engineering**

- ✓ ***Designed and managed Tier-III compliant data centers*** and implemented Hyper-Converged Infrastructure (HCI) solutions to ensure scalability, high availability, and fault tolerance.
- ✓ ***Led enterprise cloud migration and legacy modernization initiatives***, improving infrastructure agility, resilience, and cloud readiness (public, private, and hybrid).
- ✓ ***Engineered robust cybersecurity architectures and disaster recovery solutions*** to protect critical infrastructure from emerging threats and ensure continuous operations.
- ✓ ***Developed interoperable, API-driven platforms*** to enable cross-platform data sharing between education, health, social protection departments and financial institutions.
- ✓ ***Ensured compliance with national and donor data standards***, privacy regulations, and cybersecurity protocols throughout the system development lifecycle.

➤ **IT Management & Operational Leadership**

- ✓ ***Developed and executed enterprise IT strategies*** aligned with public sector digital transformation priorities, governance frameworks, and long-term sustainability goals.
- ✓ ***Directed end-to-end delivery*** of high-impact government and donor-funded IT infrastructure programs, from design to operations, with measurable outcomes.
- ✓ ***Led cross-functional technology teams*** and coordinated with executive stakeholders, ensuring project alignment, stakeholder buy-in, and operational impact.
- ✓ ***Optimized capital and operational expenditures*** through strategic sourcing, virtualization, workload optimization, and automation strategies.

➤ Application, Systems & AI-Driven Development

- ✓ *Designed, developed, and deployed custom-built Management Information Systems (MIS)* for public sector programs, enabling real-time performance tracking, service delivery monitoring, and data-driven governance.
- ✓ *Implemented real-time monitoring*, observability, and predictive analytics platforms for infrastructure performance optimization and early fault detection.
- ✓ *Integrated enterprise systems across vertical and horizontal government departments* to ensure seamless data interoperability, governance, and compliance.
- ✓ *Integrated Artificial Intelligence (AI) and Machine Learning (ML) models* into MIS and decision support systems to enable predictive analytics, automated reporting, and policy simulation.
- ✓ *Spearheaded development of dashboards and data visualization tools* using BI platforms (e.g., Power BI, Tableau) for executive decision-making.

EDUCATION:

....	PhD CS	Topic: Group Anomaly Detection – International Islamic University, Islamabad
2011	M.S. Computer Science	Government College University, Lahore.
2004	M.Sc. Computer Science	PUCIT, University of Punjab, Lahore.
2000	M.Com. (Finance)	Hailey College of Commerce, PU, Lahore

CERTIFICATIONS:

NEO4J	GDSL	Graph Data Scientist
OCP	Oracle 8i	Database Administrator (DBA)
OCP	Oracle 8	Database Administrator (DBA)



COURSES & SPECIALIZATION:

World Quant University (WQU) - USA

Applied Data Science Specialization

Applied Data Science I: Scientific Computing & Python

Applied Data Science II: Machine Learning & Statistical Analysis



NEO4J Graph Academy Courses

- Overview of Neo4j 4.x
- Querying with Cypher in Neo4j 4.x
- Creating Nodes and Relationships in Neo4j 4.x
- Using Indexes and Query Best Practices in Neo4j 4.x
- Importing Data with Neo4j 4.x
- Graph Data Modeling for Neo4j
- Implementing Graph Data Models in Neo4j 4.x
- Cypher Query Tuning in Neo4j 4.x
- Introduction to Graph Algorithms in Neo4j 4.x



Data Analysis & Visualization



PROFESSIONAL EXPERIENCE

02-10-2023 – To date

Head of Technology / In charge Data Centre
PMIU-PESRP, School Education Department,
Government of the Punjab



Key Role and Responsibilities

- **Lead end-to-end operations of the SED Data Centre**, ensuring uninterrupted IT service delivery across the School Education Department (SED).
- **Architect and maintain integrated MIS solutions**, enhancing education planning and evidence-based decision-making through innovative data strategies and system interoperability.
- **Direct cross-functional teams** in software development, MIS, and IT operations, ensuring timely project delivery, performance optimization, and efficient resource management.
- **Enable data-driven decision-making** across all SED programs by overseeing data planning, acquisition, processing, analysis, and visualization for actionable insights.
- **Safeguard critical data assets** as the primary custodian of SED's databases, IT infrastructure, and digital systems.
- **Foster institutional partnerships and collaboration** with PITB, AG Office, SED bodies, and key stakeholders to align IT solutions with policy and operational needs.
- **Deliver tailored automation and software solutions**, coordinating with internal and external partners to meet evolving educational and administrative requirements.

Strategic Achievements in Digital Transformation

IT Systems Leadership

- ✓ **Designed and architected a Tier-III compliant enterprise data center**, aligned with Uptime Institute standards, ensuring N+1 redundancy across power, cooling, and network infrastructure to support mission-critical applications with 99.982% availability.
- ✓ **Developed comprehensive technical documentation and detailed procurement specifications** for server infrastructure, storage systems (SAN/NAS), network equipment, virtualization layers, and security appliances.
- ✓ **Planned, designed, and established a fully redundant Disaster Recovery (DR) site**, including synchronous and asynchronous data replication mechanisms, automated failover configurations, and regular DR drill protocols to meet business continuity and RTO/RPO requirements.
- ✓ **Led multi-vendor evaluation and procurement processes**, coordinating with OEMs and solution integrators to ensure cost-effective, energy-efficient, and scalable infrastructure solutions aligned with organizational performance and compliance goals (ISO 27001, ITIL).
- ✓ **Modernized data centre infrastructure** by implementing 3rd Generation Hyper-Converged Infrastructure (HCI) with load balancing and enterprise-grade security, increasing scalability and resilience by 60%.
- ✓ **Enhanced internet connectivity** from 100 Mbps to 750 Mbps with 1+1 redundancy, achieving 99.9% uptime and boosting data transmission speeds by 700%.
- ✓ **Integrated cloud-based architecture** with legacy systems, improving accessibility and cutting operational costs by 15%, supporting over 350,000 users across Punjab.
- ✓ **Led the complete migration** of SED's core IT systems (SIS, HRMIS, Real-Time Monitoring, PEPRIS) from PITB to the School Education Department, achieving seamless integration with AG Punjab and other SED departments, reducing downtime by 40%.

Strategic MIS Development & Program Implementation

- ✓ Spearheaded the development and rollout of MIS platforms supporting major CM initiatives, resulting in a 30% improvement in response times and 50% increase in real-time monitoring accuracy.
 - School Meal Program (SMP)
 - School Teacher Internship Program (STIs)
 - Nawaz Sharif Center of Excellence for Early Childhood Education (NSCoE)
 - Training Need Assessment (TNA)
 - Visual Information System (VIS) for school geolocation mapping

Enterprise-Scale MIS Systems Oversight

- ✓ Directed the design, development, and maintenance of critical SED digital systems via mobile apps, web portals, and dashboards, increasing automation by 70% and reducing manual processes by up to 50%.
 - SIS: School Census, E-Transfers, Student Results, OBDS, Staff Rationalization, Attendance Tracking
 - HRMIS: E-Pension, E-Recruitment, Inventory, Leave Management, Enquiries
 - PEPRIS: E-licensing for 15,000+ private schools integrated with BISE exam registration
 - Monthly Monitoring System: Used by 48,000+ schools for inspection and compliance reporting
 - Integrated Education Dashboard: Unified view of all SED departments for executive decision-making
 - Other strategic tools include: COT, LND, and SIF for monitoring classroom quality and student learning

Project-Based System Development & Innovation

- ✓ Delivered scalable IT platforms for provincial and donor-funded projects, enhancing service delivery and monitoring in 10,000+ schools.
 - UNICEF PECTAA: HOTS LMS for 120,000+ teachers focused on critical thinking
 - ASPIRE DLI-9: Distance learning LMS increasing training access by 65%
 - Construction Monitoring App: Real-time tracking with 75% reduction in reporting delays
 - DLI-11: National Open Data Portal (NODP) and Provincial EMIS, enabling horizontal/vertical integration
 - PHCIP: ECCE Portal and SICA for early education tracking and infrastructure monitoring
 - TALEEM: IMIS Dashboards, FLN Monitoring Suite, ASP and WASH apps improving oversight efficiency by 50%

11-08-2017 – 30-09-2023

&

10-06-2020 – 17-05-2021

General Manager MIS

Punjab Social Protection Authority
Government of Punjab



Additional Charge for the post of
Additional Director IT Infrastructure
Punjab Human Capital Investment
Project funded by the World Bank



Leading Digital Transformation, MIS Strategy & Stakeholder Integration for Social Protection Programs

- ✓ **Designed a Tier-III Compliant Data Center Architecture**, ensuring alignment with international standards for scalability, high availability, and fault tolerance.
- ✓ **Developed comprehensive technical documentation**, including detailed specifications and design schematics, for both the PRIMARY DATA CENTER and DISASTER RECOVERY (DR) SITE.

- ✓ **Led the end-to-end procurement planning** for all required hardware and software components, enabling a future-proof, resilient infrastructure environment.
- ✓ **Procured and managed IT assets and services** valued at over PKR 100 million, including vendor negotiations, SLA management, contract compliance, and technical documentation.
- ✓ **Directed enterprise-level IT infrastructure and MIS operations**, overseeing servers, networks, cybersecurity, disaster recovery, and secure data connectivity, ensuring **99.9% system uptime** and business continuity across all PSPA programs.
- ✓ **Managed end-to-end software development lifecycle** and routine operations of the MIS Wing, ensuring delivery of robust, scalable MIS solutions aligned with evolving programmatic and policy needs.
- ✓ **Led cross-functional teams** including MIS, software development, and IT operations, delivering on complex initiatives within **budget, timeline, and scope**.
- ✓ **Spearheaded development and integration of MIS systems** for major social protection initiatives such as:
 - *Zewar-e-Taleem Program (ZTP)* – Girls’ stipend tracking and distribution system
 - *Hum Qadam Program* – Disability support data system
 - *Aagosh Program* – Health & nutrition conditional cash transfer MIS
 - *Punjab Ehsaas Rashan Riayat Program (PERRP)* – Subsidy delivery, monitoring & verification platform
- ✓ **Led business process re-engineering (BPR)** to automate manual functions, resulting in **40% increase in operational efficiency** and enabling real-time data availability for all departments.
- ✓ **Designed and implemented integrated dashboards and analytics systems** for real-time decision-making, policy design, and intervention planning, directly supporting high-level government briefings.
- ✓ **Managed large-scale datasets (Big Data)** for actionable insights and visualizations, supporting evidence-based policy formulation and performance monitoring across all PSPA programs.
- ✓ **Served as a core team member** of the *Punjab Ehsaas Rashan Riayat Program* under the leadership of **Dr. Sania Nishtar**, ensuring data integrity and secure integration with NADRA, BOP, Ufone, and PITB.
- ✓ **Coordinated with key national stakeholders** including NADRA, BISP, PTA, PTCL, PMIU/SED, HISDU, and others for system integration, secure data exchange, and program alignment.
- ✓ **Streamlined data collection, analytics, and reporting processes**, enabling **data-driven decision-making** and improving delivery timelines by 30%.

12-11-2009 – 10-08-2017

Incharge MIS Dept. & MIS Research Lab / Lecturer
 Virtual University of Pakistan, Ministry of Information
 Technology and Telecommunication (MoITT),
 Government of Pakistan



Key Contributions as MIS Manager & Academic Leader

- ✓ **Contributed to the development** of a full-featured **Learning Management System (LMS)**, enabling scalable digital content delivery for over 100,000 students in a virtual education environment.

- ✓ **Contributed to the implementation of Quiz Bank & Question Bank modules** for the Virtual University Examination System, streamlining assessment workflows and ensuring consistency across nationwide testing centers.
- ✓ **Supervised and mentored 500+ undergraduate and 15+ postgraduate projects**, serving as **Head of the MIS Research Group**, guiding BS software development projects and MS-level research theses in MIS and emerging IT domains.
- ✓ **Delivered core academic instruction** to over 2,000 students across key IT and MIS subjects, including:
 - Software Project Management
 - Database Management Systems
 - Enterprise Resource Planning (ERP)
 - Introduction to Programming
 - Computer Networks
- ✓ **Served as Departmental Focal Person** for the **Prime Minister's Laptop Scheme**, facilitating digital inclusion for more than 20,000 eligible students across Pakistan.
- ✓ **Appointed Student Advisor**, providing academic and personal mentorship to 1000+ distance learners, improving engagement and academic retention.
- ✓ **Founder & Convener of the VU Tourism Society**, organizing and managing national-level educational tours, fostering experiential learning beyond the classroom.
- ✓ **Editor-in-Chief of InfoMag**, the official e-magazine of the Department of Management Sciences (2009–2011), curating academic articles, industry insights, and student publications.
- ✓ **Core committee member and national-level event organizer**, contributing to planning and execution of co-curricular and extracurricular activities enhancing student development.

18-10-2003 – 11-11-2009

Assistant Director / Developer
University of Education,
Government of the Punjab



Achievements and Responsibilities:

- ✓ **Designed and deployed customized ERP modules** for General Ledger, Procurement, Inventory, and Payroll, streamlining financial operations and reducing manual processing time by **60%**.
- ✓ **Led IT automation of procurement, budgeting, and inventory/store operations** for the Finance Wing, resulting in improved transparency, 30% faster approvals, and enhanced audit compliance.
- ✓ **Digitized the University Examination Department**, automating key processes and reducing administrative workload by **40%**, while ensuring end-to-end data integrity.
- ✓ **Supervised centralized marking operations** during university exams, coordinating logistics and technology systems for accurate and timely result processing across multiple centers.
- ✓ **Managed secure preparation, printing, packaging, and dispatch of question papers**, implementing tight access controls and tracking mechanisms to ensure **100% confidentiality and timely delivery** to all exam centers.

01-12-2000 – 30-09-2003

Manager IT,
Abdullah & Hurts Casters, Lahore

IT & MIS Operations – Key Achievements

- ✓ **Led implementation and supervision of Peachtree Accounting Software**, enabling automated financial record-keeping and improving accounting accuracy by **95%**, while reducing manual workload by **40%**.
- ✓ **Resolved critical software and hardware issues**, ensuring uninterrupted IT operations and achieving **99.5% system availability** across departments.
- ✓ **Managed procurement of IT hardware and licensed software**, streamlining vendor evaluation, compliance, and asset deployment processes — reducing procurement turnaround time by **30%** and ensuring optimal IT resource utilization.

CONFERENCES & PUBLICATIONS:

- ✓ Aqeel Feroze, Ali Daud, Tehmina Amjad, Malik Khizar Hayat: **Group Anomaly Detection: Past Notions, Present Insights, and Future Prospects.** SPRINGER *SN Computer Science*. 2(3): 219 (2021)
- ✓ Umair Pervez, Aqeel Feroze & Memoona Ilyas (2016) “**Factors Leading to Cloud Computing Adoption: A Study of Textile Spinning Units**” in the proceedings of 5th *International CUST Business Research Conference (CBRC 2016)*, Islamabad.
- ✓ Aqeel Feroze & Memoona Ilyas (2016) “**Predicting Financial Distress using Machine Learning Techniques**”, in the proceedings of 8th *South Asian International Conference (SAICON 2016)*, Islamabad.
- ✓ Aqeel Feroze & Ali Daud (2015) “**Group Anomaly Detection in Academic Social Network**”, in the proceedings of *Frontiers of Information Technology (FIT 2015)*. Islamabad.
- ✓ Aqeel Feroze & Asma Basharat (2011) “**Security Analysis of Mobile Banking Services in Pakistan**”. *Asian Transactions on Fundamentals of Electronics, Communication & Multimedia*. Vol. 1 No. 3
- ✓ Muhammad Rizwan Saleem Sandhu, Muhammad Zaheer, Muhammad Farhan Sadiq and Aqeel Feroze. (2011) “**Transforming traditional industrial cluster into innovative cluster: A case of Surgical Instruments Forging Industry of Daska, Punjab, Pakistan**” *IJCRB*. Vol. 3 No. 3

MS THESIS SUPERVISION:

Student Name	Thesis Title
Umair Pervez	Factors leading to cloud computing adoption: a study of textile spinning units (2014)
Memoona Ilyas	Predicting financial distress using machine learning techniques in services sector of Pakistan (2015)
Sayyeda Sabah Jaffar	Prediction and analysis of political preferences using sentiment analysis of Twitter Data (2016)
Zameer Ahmad	Using Machine Learning Technique to Forecast Stock Market Trend: A Case of Pakistan Stock Exchange (PSX) (2016)

REFERENCES

Professional references available upon request.