

Muhammad Abbas

Expert – Data Engineering & Architecture

Goal-driven data engineer and architect with 19+ years of experience delivering high-performing data solutions for clients across 16 countries, seeking new opportunities to leverage technical expertise, cross-cultural communication skills, and leadership ability to drive business success and create value.

Summary

As a highly skilled data engineer and data architect with over 19 years of experience servicing clients across 16 countries, I bring a unique combination of technical expertise, cross-cultural communication skills, and leadership ability to every project.

With a proven track record of leading and creating high-performing teams in diverse global environments, I have the knowledge and vision necessary to design, build, and optimize cutting-edge data solutions that drive business success. Whether working with clients in the private or public sector, I am committed to delivering exceptional results and providing unparalleled value through my deep understanding of data architecture, infrastructure, and integration.

Technical Skills

- **ETL Tools:** Pentaho Kettle, Informatica, SAS DI Studio, Talend, Azure Data Factory, AWS Glue
- **B.I Tools:** Cognos 7 & 8, Yellow fin, SAS Report Studio, SAS Visual Analytics, PowerBI, Tableau
- **Databases:** Teradata, MS SQL Server, Oracle, MySQL, MariaDB, Postgres and DB2.
- **Development Tools:** Visual Studio.NET, MS Visio, MS Project, and MS Office.
- **Version and Source Control:** Visual Source Safe, SVN, Bitbucket, GitHub, GitLab
- **NoSQL:** MongoDB
- **Language:** Python
- **Big Data:** PySpark, Snowflake, Databricks
- **Cloud Technology:** AWS, Azure

Education

M.S in Computer Science, December 2006
SZABIST- Karachi, Pakistan
CGPA 3.66

B.S.E in Computer Science, December 2004
BAHRIA UNIVERSITY- Karachi, Pakistan
CGPA 3.28

Certifications

AWS Certified – Cloud Practitioner
Microsoft Certified – Azure Fundamentals, Azure Data Fundamentals
Talend Data Integration V6 – Certified Developer
Databricks Certified – Associate Data Engineer, Lakehouse Fundamentals, GenAI Fundamentals
University of Michigan - Python for Everybody

Awards

- **Leadership Excellence Award** from Afiniti.
- **Brown Belt Award** – Exceptional performance from Primatics Financial.
- **Gold Award** – Participation in Community of Practice from Primatics Financial
- **Certificate of Achievement** – Outstanding Performance from RBS
- **Exceptional Team Award** from Systems Limited. (Worked as Component Lead in this project)
- **Outstanding Team Award** from Systems Limited. (Worked as Team Lead in this project)

Professional Experience

McKinsey & Company

Expert – Data Engineering & Architecture | April 2022 – Present

- Collaborated with diverse clients to develop data strategies and robust data governance frameworks.
- Collaborated with clients to assess existing architecture, co-create future architecture, and formulate a strategic roadmap.
- Serving as a trusted advisor to CTO and CIO teams, driving the adoption of data and AI at scale using cloud and on-prem architectures.
- Guiding clients through data-driven digital transformations in sectors like telecommunications, healthcare, insurance, and banking.
- Served as a product owner and technical lead, overseeing the development and implementation of digital twins, with a focus on energy-related use cases, for a prominent telco client, contributing to enhanced network management and optimization in the context of energy efficiency.

Afiniti

Sr. Director – Data Engineering | February 2016 – April 2022

Leading Data Engineering & Innovation team globally.

- Responsible for the functioning of the Data Engineering Department and ensuring its success.
- Adapted Data Engineering plans based on the current economic landscape and market competitiveness.
- Conducted root cause analysis to assess deviations or failures in the implementation of Data Engineering plans.
- Supervised the implementation of Data Engineering plans and managed emerging risks and threats.
- Initiated the development of reusable processes.
- Provided training and insights to enhance performance and optimize data querying.
- Offered recommendations for server architecture improvements.
- Managed the development and maintenance of reports for senior management.
- Created training materials and organized training sessions for clients on the latest technologies.
- Oversaw and managed the development of in-house tools to automate standard Data Engineering functions.

York Business Solutions (SAS Partner)

Sr. ETL / Business Intelligence Consultant | September 2014-January 2016

Leading ETL/BI development efforts for different implementations in Pakistan and Saudi Arabia. Responsibilities include Designing and Development of Data warehouse/ETL/Data Integration processes.

- Designed and developed ETL processes for SAS FMS Product at Al Rajhi Bank, KSA, using Teradata/SAS DI Studio.
- Designed and developed ETL solutions for SAS AML Product at Bank Alfalah, Pakistan, using Teradata/SAS DI Studio.
- Designed and developed ETL processes for SAS Credit Scoring Product and worked on SAS Detail Data Store for Riyadh Bank, KSA, using Oracle/SAS DI Studio.
- Designed and developed ETL processes for SAS AML at Dubai Islamic Bank, including the integration of Norkom with SAS Report Studio for legacy view, using Oracle/SAS DI Studio and SAS Reporting Studio.

Primatics Financials

Associate Technical Lead - ETL | November 2010 – August 2014

Managed a team of ETL developers specializing in Product Development and Data Integration. Key responsibilities encompassed designing and developing data warehouses, ETL processes, and data integration solutions. Played a crucial role in overseeing the complete lifecycle development and implementation of enterprise data warehousing, BI reporting, and analytical services.

- Coordinated with major project stakeholders to develop implementation strategies and gather requirements.
- Designed and developed Evolv Connect, an ETL Adapter connecting servicing systems to standard data APIs, using Informatica PC Designer and Oracle 10g.
- Installed and administered Informatica Power Center 9, utilizing various Informatica PC components.
- Documented Evolv Connect, creating Installation and Operation Guides and Activity Diagrams.
- Provided operational support to the Client Services Team for tasks related to Evolv Connect and Nodes Consolidation.

360Training

Data Warehouse Engineer | December 2009-November 2010

Responsibilities involve designing and developing data warehouses while ensuring seamless integration with all company systems. This role also encompasses active participation in the end-to-end development and implementation of enterprise data warehousing, BI reporting, and analytical services.

- Designed and developed a comprehensive Data Warehouse capable of containing all Revenue-Related Data using SQL Server 2005/2008.
- Developed ETL processes to migrate data from various systems within the company, including Virtual University, Learner MS, Learner Course MS, and My Classroom Management. Tools used: Pentaho Kettle and SQL Server 2005/2008.
- Improved Database Designs and optimized queries for enhanced performance using SQL Server 2005/2008.
- Collaborated with the Network Operations team to address performance and other database-related issues. Assisted other teams with Query Optimization and Database Development.
- Managed the migration of Store Front (IBM) and Quick Books Data to the Data Warehouse. Tools used: Pentaho Kettle, SQL Server 2005, DB2, and QODBC.

RBS

Assistant Manager (BI Team Lead/DWH Admin) – BIU | June 2008-December 2009

Responsibilities involve overseeing a Data Warehouse, including tasks such as comprehending new requirements, analyzing problems, proposing solutions, implementing changes, developing BI analytics (Reports, Cubes, and Dashboards), and verifying results with associated departments. Key technologies utilized include Cognos 8 (Report Studio, Framework Manager, and Analysis Studio), Cognos 7 (Powerplay Administrator, Powerplay Cube), and Teradata.

- Developed Cubes for Operations, AD&E, Liabilities, and Asset Marketing, enabling users to conduct various analytics such as Cross Sell, CM Retention, and Segmentation. Tools used: Cognos 7, Teradata.
- Designed strategic reporting for Consumer Risk Management, including IS-Was analysis, Vintage Analysis, Utilization Analysis, Collection & Collection Performance Reports, and Product Caps Report. Tools used: Cognos 8, Teradata.
- Provided demand analytics and reports for various departments, including Operations, Finance, AD&E, Business Quality, Branch Banking, Wealth Management Unit, Secured Assets, and Unsecured Assets. Tools used: Teradata, Excel.

Systems Limited

Senior Software Engineer (Cognos/SQL Server TL) | February 2007- May 2008

Responsibilities encompass team management, comprehending new requirements, analyzing problems, creating project plans, initiating development, implementing changes, keeping stakeholders informed, and overseeing every step from analysis to deployment.

- Served as a DBA/Team Lead for the Reporting Module/Forms of the Victors Application, designed for Lenders First Choice (Title Insurance Application). Utilized Tools: Cognos 8.2 (BI Tool), SQL SERVER 2005 (Back end), Adobe Live Cycle 7.1, 8.1 (LiveCycle Tool).
- Acted as a Team Lead for the Reporting Module of the Registrar/Transfer Authority system, designed for Central Depository Company. Developed reports for Corporate Actions, Administration, General, Transfer, and SBP sections. Tools used: JReports (Reporting Tool), Oracle 10g (Back end).
- Developed the Reporting module of Visi Loan Review for Bank of America and Freddie Mac, creating reports for all types of loans. Tools used: Crystal Report (Reporting Tool), SQL SERVER (Back end), ASP.NET (Front end).

Wavetec Pvt. Ltd.

Software Engineer | July 2006-Feb 2007

- Developed Stock Game for Dubai Financial Market. This project is a game, and all the operations and functionality are same as of Real Stock Market. SG is designed for the competition, which is arranged by DFM for the students at different schools every year. **Tools:** ASP (Front end) / SQL SERVER (Back end).
- Designed and Developed eqConfiguration System. This project is a configuration system for Electronic Queue Management System. It was designed various clients in UAE. **Tools:** VB 6.0 (Front end) / SQL SERVER (Back end) / ROUTER (Linux Based)
- Designed and Developed Attendance Management System for HR Department. **Tools:** VB.NET (Front end) / SQL SERVER (Back end) / Crystal Report (Reporting)

Crescent Leasing Corporation Limited

Assistant MIS | March 2005-July 2006

- Designed and Developed Lease Management System. This project consisted of module for Leasing, Depreciation, Assets and CIB. **Tools:** VB 6.0 (Front end) / SQL SERVER (Back end) / Crystal Report (Reporting).
- Developed CresTreasury. This project consists of modules for Treasury and Money Marketing. **Tools:** VB 6.0 (Front end) / SQL SERVER (Back end) / Crystal Report (Reporting)
- Developed Attendance Management System. This project was having two parts, first the interface with the IGAURD Machine which recorded the Attendance and secondly the reports and other process to implement other management policy. **Tools:** VB 6.0 (Front end) / SQL SERVER (Back end) / Crystal Report (Reporting) / IGAURD (Server)
- Designed and Developed ChequeInfo System, which main aim was to do the cheque management and other issues related to cheques. **Tools:** VB 6.0 (Front end) / SQL SERVER (Back end) / Crystal Report (Reporting)