

Alex Ferguson

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Executive Summary

Results-driven Senior Data & AI Consultant with 7+ years of experience delivering high-impact cloud migration, data engineering, software, and AI-driven solutions across various sectors including finance, retail, and education. Proven track record in leading cross-functional teams, optimizing ETL pipelines, developing software, and implementing scalable solutions in Azure, AWS, GCP, and Snowflake environments. Skilled in modern data platforms, advanced analytics, and mentoring technical teams.

Core Competencies

Cloud Migration | Data Engineering | ETL Development | SQL Development | Scripting & Automation | Data Modeling | Data Pipeline Design & Optimization | Agile / Scrum Delivery | Workstream Leadership | Scrum Master | Production Support | Databricks Development | Cross-Platform Integration | Team Mentorship & Training | Client Engagement & Stakeholder Communication | Data & AI Strategy | Generative AI | Machine Learning | MLOps | Data Governance | Data Product Management | Cloud Data Platforms

Professional Experience

North Highland | Senior Data & AI Consultant | Jun 2018 – Present
(Acquired The Bridge, Jan 2025 | Acquired Armata Analytics, Dec 2024)

- Led teams in delivering data solutions in On-Prem and Cloud environments (Azure, Snowflake, AWS) using Agile/Scrum.
- Designed, built, and optimized ETL processes, data pipelines, data models, and reporting solutions.
- Developed and optimized ETLs in IICS, SSIS, and Azure Data Factory based on client requirements.
- Developed software and automation scripts in SQL, Python, Java, C#, PowerShell, Spark, and PySpark.
- Designed and improved SSAS tabular models and Power BI reports to enhance reporting accuracy and performance.
- Reworked a key Stored Procedure for End of Fiscal Year calculations, meeting a 5-day deadline and ensuring accurate reporting.
- Migrated and converted existing IICS jobs into SSIS and Azure Data Factory pipelines, enabling retirement of the legacy IICS environment.

- Oversaw cloud migration projects, including Azure Synapse, ADLS, Databricks, and Delta Lake implementations.
- Helped design and execute migration of on-premises data warehouses and ETLs into Azure Synapse and Azure Data Factory.
- Established naming and organization standards for Azure Data Factory, Azure Data Lake, and Robot Schedule automation jobs.
- Directed production support, resolving data quality issues, pipeline failures, long-running jobs, and CI/CD issues.
- Planned and executed migration from mixed On-Prem/Azure Synapse datasets into Databricks using Azure Data Factory, PySpark notebooks, and Unity Catalog tables.
- Designed and implemented a new data model and report for Alarm and Crime data, enabling improved incident analysis, false alarm identification, and crime hotspot detection for store planning.
- Designed and documented cloud migration plans, Data Lake structure standards, and Azure object naming standards in collaboration with the team.
- Rebuilt existing on-premises ETLs and tables from Oracle, DB2, Microsoft Access, and SQL Server into Azure Data Factory and Azure Data Lake.
- Created detailed documentation for rebuilt processes and successfully handed them off to the client.
- Led a team to migrate and validate on-premises education data into Snowflake.
- Monitored migration progress, validated migrated data, and updated the client's internal validator with information on tables that are ready for validation.
- Conducted regular client meetings to provide progress updates and address blockers.
- Developed a new ETL using ActiveBatch, SSIS, Unix Shell Scripts, SQL Server Stored Procedures, and Informix SQL Stored Procedures to load retail data from a newer system into a legacy Informix system for reporting.
- Created a plan to ensure the legacy Informix system was read-only for all reporting users.
- Produced detailed documentation on the new ETL process and read-only implementation, successfully handing it off to the client for ongoing maintenance.
- Implemented and maintained CI/CD processes in Azure DevOps.
- Mentored and trained team members while managing task allocation and project delivery.

Education

The University of Texas at Dallas – B.S., Computer Science, May 2018

Certifications

Azure Data Engineer Associate – Microsoft (May 2020 – May 2026)

Technical Skills

Languages: Java | C | C++ | C# | SQL | PL/SQL | T-SQL | Python | PySpark | PyTorch | TensorFlow | Pandas | NumPy | Spark | 4GL | IBM Informix-4GL | PowerShell | Shell | Bash | HTML | CSS | XML | JSON | JavaScript | Batch | YAML | NoSQL

Cloud Platforms: Azure | Azure Data Lake (ADLS) | Databricks | Azure Data Factory (ADF) | Azure Synapse | Delta Lake | Microsoft Fabric | AWS | AWS S3 | AWS RDS | AWS Redshift | AWS Glue | AWS EC2 | AWS Lambda | AWS Aurora | GCP | Google Cloud Data Fusion | Google Cloud Dataflow | Snowflake

Databases: SQL | SQL Server | MySQL | PostgreSQL | Oracle | IBM DB2 | IBM Informix | Microsoft Analytics Platform System (APS) | Microsoft Access | Data Warehouse | Apache Parquet | NoSQL | MongoDB | Cassandra | Couchbase | Elasticsearch

Tools: Palantir Foundry | Informatica PowerCenter | Informatica Cloud (IICS) | SQL Server Analysis Services (SSAS) | SQL Server Management Studio (SSMS) | SQL Server Integration Services (SSIS) | Power BI | Tableau | dbt | Apache Airflow | Data Hub | Git | Bitbucket | Jenkins | JIRA | Trello | Microsoft Team Foundation Server (TFS) | Azure DevOps | Eclipse | Visual Studio | Robot Schedule | ActiveBatch | Excel | PowerPoint | OpenAI | ChatGPT | Claude AI | Gemini | Terraform | Teradata | Docker

Operating Systems: Unix | Linux | Windows

REFERENCES AVAILABLE UPON REQUEST