

# Mohamed AL-Kaisi

## Senior Consultant, MLOps Engineering

### Profile

Mohamed AL-Kaisi is a skilled MLOps Engineer with extensive experience in creating ML infrastructure, and developing data pipelines using Python, SQL, and AWS technologies. He excels in resolving technical issues, managing technical debt, and implementing data flows for analytics and BI systems. He is an expert in creating high-quality documentation with Confluence and developing analytical tools, reports, and dashboards using AWS SageMaker, Quick Sight, Power BI and Redshift.

In his leadership roles, Mohamed has successfully run projects, planning and managing sprints and daily stand-ups. Mohamed is dedicated to supporting future generations of technologists. He has a strong background in agile methodology within Scrum teams, bolstered by an MSc in Big Data and Business Intelligence and a BSc in Computer Science, along with multiple Azure and AWS certifications. Additionally, Mohamed serves as a charity trustee, demonstrating his commitment to community and professional development. He received the Changing Lives Award from Greenwich in January 2024 for mentoring students and running hackathons.

### Industries

- Central Government

### Qualifications

- MSc Big Data and Business Intelligence
- BSc Computer Science
- Azure Data Scientist Associate.
- Azure Power BI Data Analyst Associate.
- Terraform Associate
- AWS Data Engineer Associate
- Azure Data Fundamentals
- Azure AI Fundamentals
- Azure Fundamentals
- Azure Power Platform Fundamentals
- AWS Cloud Practitioner

### Technologies and skills

### Key Experience

#### Data Engineer (Department for Work and Pension)

Sep 2024 – Jan 2025

Mo collaborated with DWP Finance Department to define requirements for Power BI reporting and dashboards. He facilitated knowledge transfer sessions to improve client understanding of Power BI tools. The reports and dashboards were delivered successfully, accompanied by comprehensive documentation to ensure a seamless transition. Power BI provides robust collaboration and sharing functionalities, facilitating seamless teamwork and knowledge exchange among users.

- Conducted comprehensive Power BI training sessions, educating staff from foundational concepts to advanced functionalities.
- Developed multiple demonstration dashboards using sample data to showcase Power BI's capabilities to clients.
- Authored detailed documentation to support training and ensure continuity in Power BI utilisation.
- Engaged with clients to gather requirements, formulating key analytical questions to guide dashboard development.
- Designed and implemented final dashboards tailored to client

**Advanced**

SQL, Python, Terraform, AWS  
EC2, AWS lambda, AWS  
SageMaker, AWS Redshift,  
Website development, data  
quality, Power BI, MLOps

**Intermediate**

Machine learning, NLP,  
Oracle DB

**Basic**

Scala, Java

specifications, enhancing data-driven decision-making.

- Led final knowledge transfer sessions to ensure clients' proficiency in utilising and maintaining Power BI dashboards.

**Data Engineer (Data Assurance service, Home Office)**  
**Feb 2023 – July 2024**

The client encountered persistent data quality issues within their existing database, which hindered their business intelligence and analytics capabilities. The project identified, addressed, and prevented these data quality issues using custom-built tools and rules through AWS Glue and AWS Redshift. This ensured accurate, consistent, and reliable data for their business operations. Mohamed was instrumental in the project, working with cross-functional teams to tackle data quality issues by performing business analysis, UI development, ETL processes, and DevOps automation.

- Proactively conducted business analysis by engaging with users to gather crucial information for development requirements.
- Developed and implemented robust data quality assurance tools, enabling effective scoring and monitoring of data quality.
- Created comprehensive HTML reports with interactive charts using JavaScript libraries, effectively presenting data insights.
- Led the management of a PostgreSQL database, executing complex queries to enhance data quality and integrate new datasets.
- Executed various AWS Glue jobs for analysing large-scale data, leveraging AWS SageMaker; delivered detailed reports in Excel format.
- Pioneered the automation of data flow into a graph database, constructing a Python-based pipeline to transform raw data into JSON-LD and N-Quads, and storing them in AWS S3.
- Automated data ingestion from S3 into Redshift using EC2 and Lambda functions, optimising the data transfer process.
- Containerized a Python script for transforming data from RDS into JSON LDA format, ensuring efficient and scalable data processing.
- Developed Lambda functions to automate AWS Glue jobs, transforming and preparing data stored in S3 for Redshift integration.

### **Data Engineer (Home Office – Data Service & Analytics )**

**Sept 2021 – Feb 2023**

The client required the development of robust data systems and pipelines to enhance data processing efficiency and reliability. They faced challenges with data flow integration across operational systems, analytics platforms, and Business Intelligence (BI) systems. The project implemented seamless data flows, ensured system stability, and enabled comprehensive data analysis and reporting through high-quality documentation and rigorous testing. He played a critical role across the mapping team, data analytics team, and software engineering team, ensuring the development of efficient data systems, seamless data flows, and high-quality software solutions. The team developed pipelines that moved client data from on-premises servers to the cloud and added new systems as needed. These new systems were built in a similar manner, automating the process of creating data pipelines.

- Developed robust data systems and pipelines using Java Spring Boot, enhancing data processing efficiency and reliability.
- Successfully resolved blocking issues and managed technical debt, ensuring smooth project progression and system stability.
- Implemented seamless data flows connecting operational systems, analytics platforms, and Business Intelligence (BI) systems, enabling comprehensive data analysis and reporting.
- Delivered high-quality documentation for critical functionalities using Confluence, facilitating knowledge sharing and maintaining project transparency.
- Developed powerful analytical tools and programs using SQL, enabling detailed data analysis and reporting.
- Delivered high-quality code, including unit tests, feature tests, stubs, and integration tests, ensuring robust and reliable software solutions.
- Worked effectively in an agile environment as part of a Scrum team, contributing to efficient project delivery and continuous improvement.

### **Business Analyst (Metropolitan Police)**

**Jan 2022 – April 2022**

The client required a comprehensive understanding of their data storage and flow to make informed decisions. The project aimed to gather and document business requirements from various stakeholders, map out the data flow, and develop a Power BI report

to provide clear insights into data storage and movement. In this project, He served as a Business Analyst, facilitating meetings with over 50 clients to gather necessary information, mapping out data flows, and supporting the development of a Power BI report.

- Interfaced with various stakeholders to understand and document business requirements
- Supported the project team in mapping out the end-to-end project lifecycle.
- Provided detailed analysis, options and recommendations to stakeholders to gain buy in.
- Contributed to strategic initiatives from inception to completion.
- Ensured updates were regularly communicated, and projects/tasks were correctly prioritised.

**Member, Board of Trustees (Compass Collective)**  
**November 2020– Present**

The charity's mission was to raise public awareness of the lived experiences and issues faced by refugees and those seeking asylum through performing arts. The project focused on enhancing outreach, securing resources, and providing support to young people through strategic partnerships, IT workshops, and mentorship programs. As a trustee, Mohamed was responsible for the oversight of securing funding, organising IT workshops, forming strategic partnerships, and providing resources and mentorship to young people.

- He championed the charity's mission, ensuring all efforts directly benefited the public.
- He stayed well-versed in the charity's foundational guidelines and adhered strictly to pertinent laws.
- Mohamed aligned all decisions with the charity's objectives, maintaining impartiality and avoiding personal biases.
- He managed the charity's resources ethically and efficiently to maximise impact.
- Utilising his expertise diligently, he continually strived for role enhancement and organisational growth.
- He upheld the charity's values through transparency, accountability, and adherence to reporting protocols.
- Passionate about serving the greater good, Mohamed prioritised ethical standards, transparency, and the mission's essence in all charitable endeavours.