Moustafa Mahmoud

UK Exceptional Talent Visa Holder
London, UK

📞 +44 7360213714   ✉ contact@moustafa.uk   🐙 MoustafaAMahmoud   in MoustafaAMahmoud

Experience

Microsoft, UK   **London, UK**
Senior AI Architect, Global Black Belt, Microsoft, UK   *May 2024 – Present*

- Provide in-depth AI expertise to Azure customers, offering technical guidance on Azure AI Services including Cognitive Services and Azure OpenAI.
- Develop and implement integration strategies and enterprise architectures for Azure AI solutions, ensuring best practices and optimal performance.
- Lead proof-of-concept projects to verify customer ideas and create business fit strategies, accelerating adoption of Azure AI technologies.
- Develop AI Accelerator projects to enable rapid demonstrations and facilitate quick start-up of AI implementations for customers.
- Advise top-tier customers on incorporating AI accelerators into their cloud strategies, recommending migration paths and application architectures.
- Collaborate with product management to prioritize solutions impacting customer adoption of Azure AI Services.
- Address critical aspects such as security, IP protection, performance optimization, and scalability for AI implementations.

Publishing:

– Open-source AI accelerators on GitHub:

- Azure AI Promptflow Accelerator: A tool for building and deploying AI-powered customer support systems using Azure OpenAI, Azure AI Search, and Promptflow.

- Azure AI Translator Accelerator: A cloud-based solution for automating document translation with Azure OpenAI and Azure AI Translator, featuring exclusion word handling and document watermarking.

Millennium, UK   **London, UK**
Solution Architect   *Sep 2023 – May 2024*

- **Cloud Platform and Application Development**: Led the design and maintenance of cloud components and GenAI applications, boosting operational efficiency and platform scalability.
- **AI-Enhanced Productivity Tools**: Innovated AI-driven development tools, significantly reducing time-to-market and enhancing developer productivity.
- **Comprehensive Cloud Solutions**: Expertly architected and maintained multi-cloud solutions across AWS and Google Cloud, enhancing market reach and customer satisfaction.
- **CI/CD and Monitoring Implementation**: Implemented CI/CD pipelines and monitoring systems, improving deployment efficiency and system reliability.
- **Data Management and Automation**: Automated data resiliency and container management processes, securing data integrity and reducing setup times.
- **Cloud Cost Optimization**: Successfully consulted on cloud cost reduction strategies, achieving substantial savings in cloud expenses and optimizing architectural efficiency.

Amazon Web Services (AWS)   **London, UK**
Senior Solution Architect   *Aug 2021 – Aug 2023*

- Working directly with AWS customers to implement strategic data and ML initiatives – from pre-sales validation and customer upskilling to architectural design, hands-on technical solutioning, coding, and go-live

strategies. Accelerate customer success in architecture, development, and deployment of cloud database, analytics, and machine learning solutions.

- Work alongside customers to build data management platforms using Amazon Elastic Map Reduce (EMR), Amazon Redshift, Amazon Kinesis, Amazon Machine Learning services (inc. Amazon SageMaker), Amazon Athena, AWS LakeFormation, Amazon S3, AWS Glue, Amazon DynamoDB, Amazon NeptuneDB, and Amazon Relational Database Service (RDS).
- Accelerate enterprise customers migration from a monolithic Data Lake to a Distributed Data Mesh.
- Interfacing directly with AWS service teams (e.g., S3, Glue, Rekognition, SageMaker, Glue Databrew) to improve services, add customer requested features, and resolve issues.
- Delivering service first-call decks and leading deep dive discussions with diverse customers ranging from frontline builders to C-suite executives as part of the DataOps Technical Field Community.
- Lead the creation of the Data Lab DataOps domain coordinating an international team to develop internal and external technical thought leadership content, performing business development and pipeline management, and working with our customers to implement novel DataOps architectures focusing on the pillars of CI/CD, data quality, and data observability.

Publishing:

- **AWS Blog Post**: Land data from databases to a data lake at scale using AWS Glue blueprints AWS Blog, Github Code.
- **AWS Glue Service Contributions**:
  - Helped in the development and testing for AWS Glue native integration with Apache Hudi 0.12.0.
  - Contributed to AWS Glue service product by adding Apache Hudi Connector 0.10.1 for AWS Glue in Amazon marketplace: product link, and announcement post.

Onfido   **London, UK**
Senior Data Engineer   *Sep 2020 – Aug 2021*

- Building efficient and reliable data pipelines, ingest and transform data sets using AWS services (S3, Glue, Spark, DMS, Redshift, and Athena).
- Migration of the Extraction Layer from batch processing to near real-time using Terraform, DMS CDC and AWS Glue solution (utilizing AWS Spectrum), reducing the overall delivery time of raw data from 1 hour to 5 minutes.
- Working alongside Machine Learning team to help with MLOps alongside building data pipeline services for the wider development organisation, providing a one-stop-shop for the analytics services.
- Onboarding new team members to become productive as soon as possible, through both presentations, as well as pair programming.

EPAM Systems   **Krakow, Poland**
Senior Big Data Engineer   *Oct 2018 – Sep 2020*

- Building and Maintaining Big Data Platform for EPAM's customers.
- Developing Machine Learning Models for our customers to support the business decisions.
- Consulting our customers about the best practices for Big Data Engineering.
- Developing Batch and Stream Big Data Jobs using Kafka, Spark and Hadoop.
- Analyze business requirements and designed solutions for Big data and Analytics projects.
- Helping our customers to build Big Data pipeline and support their production environments using Dev-Ops tools such as Jenkins, Docker, and Gitlab.

Etisalat   **Dubai, UAE**
Senior Big Data Analytics Engineer   *May 2016 – Sep 2018*

- I was the first member of Big data team at Etisalat UAE and helped in designing and building the big data platform and grow the team.
- Lead the development team of the Big Data and Analytics department.
- Helped to scale the team from 2 members to 18 members.
- Responsible for designing all of Etisalat's Big Data jobs for ETL and Aggregations.
- Analyzed business requirements and designed solutions for big data and analytics projects.

Projects:

- **Big Data Integration**: Built a Real Time Marketing (RTM) framework enabling Etisalat to tap on telecoms data sources, providing real time marketing use-cases and projects for customers, both individual and corporate, who have employed our Big Data platform capabilities (IBM Streams, PIG, Oozie, Hive, and Spark).
- **Customer Happiness Index**: Developed statistical model for calculating the customer happiness index based on the customers' interactions with Etisalat's systems which allow the business to understand the customer behaviour and increase customer satisfactions by 10% using the model report. (Hadoop, R, Spark,Scala, and Hive).
- **SIMBOX Fraud Detection**: Developed a machine learning model to detect the pattern SIMBOX fraud activities. Fraudulent SIM Boxes hijack international voice calls and transfer them over the Internet to a cellular device, which injects them back into the cellular network in the destination country as a local call. This model increase the customer fraud detection to be from 60% to be more than 92% (Spark, SPSS and R).

Etisalat   **Cairo, Egypt**
Data Analyst   *Feb 2015 – Apr 2016*

- Provide data and analysis needed for Business Intelligence and Reporting Team members.
- Design and develop ETL processes and reports serving complicated transformation and data cleansing logic.
- Respond to business needs and translate into specifications (requirements gathering).
- Performing analytics and reconciliation activities
- Automation of daily, weekly, and monthly ETL processes.
- Ensuring data availability for business operational reporting purpose.

Projects:

- **Location Update**: Perform streaming data processing for customers' locations updates and handle online campaign to customers (Hadoop, Hive, Storm, and Java).
- **Geo RF**: Geographical Dashboard for Radio Frequency team in Etisalat Egypt to review the Network and its details including (Sites, Sectors and Cells 2/3G) responsible for data extraction, cleansing, analysis, and data quality development.
- **Geo Marketing**: Geographical Dashboard for Marketing team in Etisalat Egypt to review the customer activities including usage, locations, recharge per area, and network activity such as dropped calls; responsible for data integration, analysis, and BI reports.

Mobiserve   **Cairo, Egypt**
Solution Developer   *Dec 2013 – Dec 2014*

- Web and Desktop Solution Developer.
- Business requirements analysis and gathering.
- Understanding of reporting structures and layouts using various enterprise reporting tools.
- Working into automate the CRM and Delivery cycle End-to-End.

Karizma   **Cairo, Egypt**
Solution Developer   *June 2013 – Dec 2013*

- Web Application developer.
- Design and handle database operations for our developed systems.

HCILAB   **Cairo, Egypt**
Undergraduate Research Student   *June 2011 - Aug 2012*

- Developed a new technique to interact with big display screens using laser pointers.
- Designed an algorithm to detect circle gestures and gestures inside circles.

Skills

Big Data: Hadoop, Spark, Kafka, Map-Reduce, Pig, Hive, Sqoop, Oozie

Programming: Scala, Python, R, Java, Shell Programming, Matlab, Mathematica, LaTeX
DevOps: Terraform, CloudFormation, Jenkins, Docker, Git
Databases: Teradata, Netezza, Oracle, MySQL
ETL Tools: IBM Data Stage, Talend
Cloud: AWS

Education

Nile University   **Egypt**
M.Sc. Computer Science (Major: Deep Learning)   *Sep 2014 – Mar 2019*

- **Thesis**: Learning Meters of Arabic Poems with Deep Learning
- **Publication**: Waleed A. Yousefa, Omar M. Ibrahimea, Taha M. Madboulya, Moustafa A. Mahmouda, Ali H. El-Kassasa, Ali O. Hassana, Abdallah R. Albohya, Ahmed A. Abouelkahire, "Learning meters of Arabic and English poems with Recurrent Neural Networks: a step forward for language understanding and synthesis"

Nile University   **Egypt**
Diploma, Big Data & Data Science   *Oct 2015 – July 2016*

Helwan University   **Egypt**
B.Sc. Computer Science   *Sep 2009 – May 2013*

Certifications & Achievements

AWS Certified Solutions Architect - Associate SAA-C02

Best Employee of the Month 2 times at Etisalat (May 2017, Jan 2018)

Best project award in Etisalat group: Real Time Marketing (RTM) project in 2017

Extracurricular Activities

Dec 2019 - Present: Online instructor provides online courses in different topics such as Data warehouse, Big Data, Scala, Spark, and Distributed Systems. YouTube Channel

Sep 2015 - Present: Co-founder of the Egyptian AI & Big Data Geeks facebook group

Sep 2015 - Present: Speaker at Big Data Meetups in Cairo, Talk about several Data Science and Big Data topics such as Hadoop platform architecture, Big Data eco-systems and Data Science with R session videos.