

I am a Solutions Architect and Full Stack Engineer with experience building end-to-end ML solutions for clients.

Languages	Frameworks	Platforms	Skills
<ul style="list-style-type: none"><li>Scala/Java</li><li>Python</li><li>C/C++</li><li>Go</li><li>Rust</li></ul>	<ul style="list-style-type: none"><li>Pandas/Sklearn</li><li>Zio</li><li>SparkMMLib</li><li>PyTorch</li><li>React</li></ul>	<ul style="list-style-type: none"><li>Hadoop/Spark</li><li>Kubernetes/Openshift</li><li>AWS/GCP</li><li>Linux</li><li>Docker</li></ul>	<ul style="list-style-type: none"><li>Machine Learning</li><li>Gen AI</li><li>Analytics/Big Data</li><li>NLP</li><li>Embedded Systems</li></ul>

## Career Summary

### 2021 – present Data Scientist — IBM Expert Labs

Build and deploy cloud-native AI solutions on IBM Cloud Paks and Red Hat Openshift for enterprise clients. Collaborate with product management and various stakeholders across IBM and enterprise clients to build high value add solutions and drive AI adoption.

- Led development of Retrieval-Augmented Generation powered customer support agent using IBM Granite foundation Models. Integrated GoLang backend with Elasticsearch vector database to support multimedia search and automated FAQ generation. Integrated IBM Carbon React frontend interface with IBM Sterling OMS and Watson Assistant. Developed comprehensive testing framework for LLM prompt validation and tuning.
- Implemented GPU monitoring platform for tracking LLM workloads on on-prem NVIDIA hardware using Prometheus, Db2, Scala and WatsonX integrations.
- Train and deploy BERT entity-extraction models to automate coding for clinical pathways program. Drove automation of clinical tasks with improved accuracy for NHS partner hospitals.
- Develop applications for performing embedded database machine learning to support model drift and explainability analysis on federated data. Collaborate with UX teams to distill complex findings into actionable insights.
- Develop federated data platform for tracking bias across machine learning models deployed to Google Cloud using Watson Query and React.

### 2019 – 2020 Data Scientist — IBM Cloud Pak Acceleration Team

Build AI solutions on IBM Cloud Paks and Openshift. Deploy to various cloud providers (AWS/Azure/IBM Cloud)

- Developed federated DB2 data warehouse for merging JSON and tabular data source from external APIs and remote databases (Hive, MySQL, Postgres).
- Developed Scala and Python microservices for integrating analytics applications with federated authentication services. Developed federated data platform in Db2 for tracking performance of ML models for large retailer.
- Proposed and implemented ML driven solutions for tracking COVID data for public client. Produced human-readable visualizations of model predictions to enabled stakeholder action. Manage enterprise Openshift and Cloud Pak for Data clusters.

### 2018 – 2019 Data Specialist — Princeton University

Assist research team in producing visualizations, data validation and data quality pipelines, and conducting statistical analysis of Arab Barometer survey data.

- Design and deploy data quality monitoring pipelines in R and Python. Build regression and RandomForest models to analyze survey data and contribute to original research. Perform statistical analysis and quality analysis of survey data. Provide Arabic-English translation assistance.
- Build pipelines for cleaning and managing Arab Barometer survey data to support automated data cleaning.
- Build dashboards, reporting and analytics pipelines. Conducted statistical analysis of Arab Barometer data and contributed to research.

## Education

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| 2019 | Dual Masters of Global Policy Studies and Middle Eastern Studies (University of Texas at Austin) |
| 2015 | Bachelors of Arts, Classical Languages (Hunter College, City University of New York)             |

## Languages

Native English, Professional Fluency in Arabic, Conversational in Japanese, German, French and Turkish