



Mohammed Azizi

Lead Data & Machine Learning Engineer



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With a strong expertise in artificial intelligence and data analytics, I have had the opportunity to work on and lead end-to-end projects in various fields such as finance and healthcare, delivering value to each profession through specific use cases that seamlessly integrate into both business and technical workflows.

Experiences

Lead Data & Machine Learning Engineer

Natixis Investment Managers - Since January 2022

- Paris - France

- ▶ Lead and Develop AI and Data Analytics Initiatives for Natixis' Asset & Wealth Management Division. Key Projects:
 - ▶ Generative AI : Design and implement generative AI solutions within a highly secure environment, using cutting-edge technologies such as quantized Large Language Models (LLMs) and Retrieval-Augmented Generation (RAG) systems. The goal of the use case is to provide the business team with a GenAI tool that allows them to interact with internal databases using natural language.
 - ▶ Fund Performance Analytics Platform: Design a data analytics platform to monitor fund performance by integrating external and internal data. This includes a dashboard for in-house versus competitor fund comparisons and an email alerting system for key performance indicators.
 - ▶ Client 360: Develop data analytics projects that involve extracting, loading, and analyzing customer engagement data to construct comprehensive 360° dashboards. Our goal is to leverage data insights to support strategic decision-making and provide a 360 view of client engagement channels.
- ▶ Technical Environments & Tools: Azure Data Factory, Azure Databricks, Azure Machine Learning, GCP, Vertex AI, Azure OpenAI, Informatica, Terraform, Jenkins, Tableau, BigQuery, Spark, XLDploy, PowerBI, Airflow

Co-founder - Head of AI

DataPathology - January 2021 to April 2024

- ▶ Co-founder and head of the AI department at the startup DataPathology, specialized in digitizing the processes of pathological anatomy and using AI approaches for cancer detection. I was responsible for leading and developing AI solutions, particularly for breast cancer.
- ▶ My role includes the following:
 - ▶ Implementation of the scientific approach to address the cancer diagnosis problem
 - ▶ Implementation of the technical approach
 - ▶ Technical and clinical evaluation of the approach
 - ▶ Development and deployment of a web application to make the application available to doctors
- ▶ Technical Environments & Tools: AWS, Flask, IIS, Azure DevOps

Data Scientist



Natixis CIB - January 2018 to November 2021 - Paris - France

- ▶ Build Machine Learning solutions for the CIB branch of Natixis. Key Projects:
 - ▶ Interest Rate Hedging: Building a tool that automatically helps manage the risks of interest rate changes for derivatives making smarter decisions by using recurrent neural networks to optimize the hedging.
 - ▶ Use NLP to analyze the minutes from client minutes, and turning their words into actionable insights
 - ▶ Smart Recommendations for Hard-to-Sell Assets.
- ▶ Technical Environments & Tools : Azure Machine Learning, MLFlow, Spark, Azure DevOps, XLDeploy, PowerBI, Hadoop, Docker

Data Scientist



Total Energies E&P - June 2017 to January 2018 - Paris - France

- ▶ Build a cognitive platform for Information Retrieval tasks that improves our understanding of unstructured and semi-structured document, primarily using NLP & Computer Vision techniques. Key features of the platform include:
 - ▶ Named Entity Recognition to accurately extract specific entities from PDF documents
 - ▶ Entity Relationship Extraction
 - ▶ Deep Learning system for efficient table extraction and comprehensive document layout analysis.
 - ▶ Create a web API for the beta testing phase of the tool, facilitating user interaction and feedback.
- ▶ Technical Environment & Tools : Python, Tensorflow, Flask, Spacy

Skills

Technical Skills

- ▶ Azure
- ▶ GCP
- ▶ PowerBI
- ▶ Docker
- ▶ Python
- ▶ Jenkins
- ▶ Terraform
- ▶ MLFlow
- ▶ Tableau
- ▶ Spark
- ▶ Airflow
- ▶ AWS

Business Skills

- ▶ Financial Markets
- ▶ Healthcare

Certifications



Generative AI with Large Language Models
12/2023

[\(View certification\)](#)



HashiCorp Certified Terraform Associate
09/2023

[\(View certification\)](#)



Google Cloud Certified Professional Data Engineer
11/2022

[\(View certification\)](#)



Microsoft Certified: Azure Data Scientist Associate
09/2021

[\(View certification\)](#)



Microsoft Certified: Azure Fundamentals
02/2021

[\(View certification\)](#)



Natural Language Processing with Attention Models
11/2020

[\(View certification\)](#)




Sequence Models
11/2020

[\(View certification\)](#)

Languages

 French

 English

 Arabic

Education

**Master of Engineering - Information Technology ,
Machine Learning & Quantitative Finance**
INSTITUT MINES-TÉLÉCOM ATLANTIQUE (EX- TÉLÉCOM BRETAGNE)
2015 to 2018

IMT Atlantique, as a public top French higher engineering school combining digital technologies, energy, and environmental sectors, proposes engineering degrees mainly through programs at Master level.

Main courses:

- ▶ Advanced statistics (Estimation, Classification and Decision)
- ▶ Financial Markets
- ▶ Stochastic Calculus
- ▶ Algorithmic Trading
- ▶ Computer Vision (Deep Learning)
- ▶ Software engineering
- ▶ Networks

Exchange semester - Artificial Intelligence / Data Science

SHANGHAI JIAO TONG PARISTECH ELITE INSTITUTE OF TECHNOLOGY

January 2017 to July 2017

Exchange semester in Shanghai Jiao Tong University - ParisTech Elite Institute of Technology.

Main Courses:

- Deep learning
- Data mining
- Mobile robotics
- Cloud computing
- Advanced database management
- Queuing theory
- Finance and strategy

Bachelor degree in parallel with the engineering studies

UNIVERSITÉ DE BRETAGNE OCCIDENTALE

2015 to 2016

Third year of a bachelor degree in parallel with the engineering studies.

Main courses :

- Topology & linear algebra
- Functional analysis
- Stochastic calculus
- Probabilily & Statistics

Higher School Preparatory Classes

Lycée MOULAY YOUSSEF RABAT

2013 to 2015