Amine LAHOUANI

Senior
Data Scientist

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Tech Stack

- Python / R / SQL
- TensorFlow / Pytorch
- BigQuery
- Looker ML
- Git / Github
- KubeFlow
- Apache Hive / Spark
- Docker / K8s
- Neo4J
- SingleStore

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Experience

Lahouani Amine

Residence Les Champs du Primtemps , Ain Sebaa , Casablanca , 28820

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Portfolio : https://personal-portfolio-website-lac.vercel.app/

Senior Machine Learning Engineer with a strong background in Large Language Models , Foundation Models Tuning , Transfer Learning and Multi-Agent Systems. As Google Cloud Platform (GCP) Machine Learning Engineer, I specialize in leveraging cloud technologies to optimize AI solutions. My expertise extends to the financial sector, where I have applied advanced data analysis and machine learning within investment banks to enhance decision-making and operational efficiency.

Tax Department , Fraud Detection Bureau / Lead Data Scientist , Consultant , Freelance

Feb 2024 - PRESENT, Rabat , Morocco (6 Months)

Projet 1 : Entity Resolution Model with Deterministic and Probabilistic Approach

- Performed Entity Resolution at scale with Vectorization and Cosine Similarity
- Developed and Deployed in production ML-based Entity Resolution at scale Models to learn Similarity within semantic Fields (Siamese Neural Networks (SNNs) , Probabilistic Signature Clustering , Embeddings with Mistral-7B , Pipelining with KubeFlow , Deployment with Docker/K8s , CI/CD with jenkins.

Tech Stack: Cloudera / SPARK , Python , GCP , KubeFlow , AirFlow , TensorFLow , HuggingFace , SingleStore , AramgoDB

Projet 2 : Fraud Detection with Graph Networks and XGboost

- Designed data pipelines and ETLs to collect and preprocess public Data (Social Networks , Listing Websites , …)
- Extracted Text Data with OCR Algorithms , using Python , TensorFlow , Tesseract , OpenCv
- Developed and Deployed in production ML-based Anomaly Detection Models leveraging the power of Graph Networks , and Gradient Boosting

Tech Stack: Neo4J , Cypher , Python , KubeFlow , AirFlow , TensorFLow-Keras , pytesseract , OpenCv , Jenkins , K8s

Infomineo / Senior Data Scientist , Full-time

Jan 2023 - Feb 2024 , Casablanca , Morocco (1 Year)

- Lead the design and implementation of data pipelines for various financial sector clients, focusing on scalability and robust data management.
- Deployed and maintain ML solutions locally and with GCP
- Packaged and served ML models on the Google Cloud Platform (GCP), ensuring efficient model deployment and accessibility.
- Implemented Continuous Integration/Continuous Deployment (CI/CD) to streamline development and deployment processes
- Spearheaded initiatives to stay at the forefront of technology by adopting the latest innovations in data-driven methods and machine learning, customizing solutions to meet complex client needs.
- Collaborated with cross-functional teams to integrate data-driven and ML technologies into client systems, ensuring seamless technology enhancements.

Société Générale - Africa Technologies & Services / Data Scientist
Global Credit Strategy Team , Full-Time

Sept 2021 - Jan 2023 , Casablanca , Morocco (2 Years)

- Leveraged ML to innovate credit modeling and strategy, significantly improving predictive accuracy under senior strategist mentorship.
- Utilized econometric and time series analysis to drive strategic recommendations, optimizing client outcomes in the credit sector.
- Implemented CI/CD practices to ensure continuous improvement and efficient deployment of ETL workflows.
- Specialized in Financial time series modeling , utilizing advanced Python libraries (Pandas, Numpy, Scipy) to extract actionable insights from complex datasets.
- Developed interactive data visualizations and GUIs with Tableau, Matplotlib, Seaborn, and Python Tkinter to enhance data interpretability and user experience

DIVIC . Corp / Ruby Developer , Full-time , Apprenticeship

Juillet 2020 - Janvier 2021 , Tokyo , Japan (1 Year)

- Back-End: RoR
- Front-End: Vue.js, TypeScript, jQuery, Bootstrap4
- Base de données: PostgreSQL, SQLite3 (MangoDB pour NoSQL)
- Middleware: Kafka, AWS Glue
  Stack : Rails Framework, Linux, Git bash

International University of Japan - Research Center / Research Assistant
Part-Time

Septembre 2019 - Juin 2020 , Niigata , Japan (1 Year)
- Portfolio Optimization: Optimized portfolios using factor-integration, including momentum, value, size, profitability, investment, and their integration.

- Developed a new approach for optimizing the Information Ratio (IR) through a multi- stage optimization algorithm using Principal Components Analysis and Clustering.
- **Project Keywords**: Quantitative Finance / Market Pricing and Hedging / Interest Rate Derivatives / FX and Credit / CVA / Monte Carlo Simulation / Rate Exotic Derivatives / Interest Rate Hedging /Machine Learning and Regression Models / Contract Pricing / CDS, CDO, CVA

Japan Securities Finance , Corp / Data Scientist Intern , Global Credit Strategy Team , Permanent

Juin 2019 - Décembre 2019 , Tokyo , Japan

- Automated and Stream-lined the repo transactions' process using Python , RPA
- Market research and segmentation with Advanced Clustering Models
- Engaged in Fixed Income, Japanese Common Equity and Preferred Stocks related transactions
- Participated (alongside with Traders) in Short selling, CDS and Securities borrowing and Lending operations

Ministry of Economy and Finance , Budget Department / Data Scientist , Permanent

Avril 2015 - Juillet 2018 , Rabat , Maroc (4 Years)

- **Macroeconomic Policy Analysis:** Developed and Deployed general macroeconomic statistical analysis using Python , SAS, and R with various models such as VAR, SVAR, ARIMA, SARIMA, and ARDL.
- Oversaw Policy Impact Studies and Models using static and dynamic general equilibrium models.

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Education

International University of Japan / Master of Business Administration

2018 - 2020 , Niigata , Japan

- Quant.Finance and Financial Modeling Specialization .

National Institute of Statistics and Applied Economics /Engineer's Degree

2011 - 2014 , Rabat

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Certifications

- GCP Machine Leaning Engineer - Google Cloud Platform

- Deep Learning Specialization - DeepLearning.AI

- DeepLearning.AI TensorFlow Developer - DeepLearning.AI

- Modern Big Data Analysis with SQL Specialization – Cloudera

· State Estimation and Localization , Visual Perception for Self-Driving Cars for Self-Driving Cars   - University of Toronto