



ADRIEN KOUKI



DATA/ML ENGINEER

PERSONAL PROFILE

I am a passionate data and Machine Learning engineer with a strong background in software development. I have extensive experience designing and scaling data pipelines for SaaS platforms.

I possess the AWS Machine Learning Engineer Associate certification, with expertise in namely conversational apps.

EDUCATION

IMT Atlantique (ex Mines Nantes)

Masters in Computing for Decision Help | Sept 2013 - Aug 2016

Université Paris Saclay

MSc. Machine Learning | Sept 2016 - Aug 2017

WORK EXPERIENCE (1/4)

Senior ML Engineer - Regulatory and Claims Team

L'Oréal | Feb 2025 - Present

At L'Oréal's Research & Innovation department, I team up with pros of life sciences domains including Safety, Regulatory, Claims and Microbiology. My role centers on empowering specialized teams with cutting-edge technology solutions that transform time-consuming processes into efficient workflows, allowing scientists and experts to focus on higher-value activities.

- **Generative AI Implementation:** Designing and implementing advanced prompt engineering systems for automated marketing claims evaluation, reducing manual review time by 80%
- **Data Pipeline Architecture:** Developing web scraping solutions and building robust ETL processes using dbt and Dagster, enabling seamless data integration across data stores
- **Knowledge Graph Innovation:** Conducting research and implementation studies to map complex relationships between product ingredients, claims, and regulatory requirements, creating a unified linked information ecosystem.

CONTACT



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SKILLS SUMMARY



Data Engineering



Software Development



Database design



Machine Learning



Data Pipeline design



Cloud engineering (AWS, GCP ...)

HOBBIES



Cuisine



Sports (swimming, climbing)



Language learning



Meetups

WORK EXPERIENCE (2/4)

Senior ML Engineer - claims automation team - scaleup

Qantev | Nov 2024 - January 2025

As a Machine Learning Engineer at Qantev, I actively contribute to developing AI solutions for automated legal document analysis in the insurance industry. I was involved in designing and implementing end-to-end solutions, from digitization (OCR) to database integration, including named entity recognition, prompt engineering.

- **Generative AI & OCR Integration:** I integrated generative AI models (LLMs) and Optical Character Recognition (OCR) technologies to automate the processing and analysis of legal documents, improving data processing efficiency.
- **API Design & Maintenance:** I designed and maintained efficient APIs to facilitate access to AI services and models, ensuring their performance and reliability. Acted as an information relay with product, devops and data model teams
- **Data Pipelines & Quality Control:** I ensured efficient data pipeline integration with rigorous quality controls to guarantee data integrity and efficient information flow within the system.

Lead Data Engineer - Tech Delivery Team - scaleup

Pelico | Apr 2024 - Oct 2024

As a Lead Data Engineer, I spearheaded a small team in delivering cutting-edge supply chain solutions for top-tier manufacturing clients, leveraging my technical expertise and leadership to drive innovation and excellence at Pelico, a pioneering SaaS provider in supply chain management, repair maintenance and overhaul of complete equipments.

- Led a team of 4 data engineers in the development and implementation of supply chain solutions for manufacturing clients in the aircraft, jewelry, and automotive industries. ETL with Apache Airflow on Azure/OVH
- Leveraged expertise in modern data engineering tools, including Apache Airflow, Kubernetes, DBT Core, Terraform, and Ansible, to build and maintain robust data pipelines and infrastructure.
- Utilized Agile project management methodologies, with a focus on clear communication and task management using Linear, to ensure on-time and within-budget project delivery.
- In close contact with stock optimization and configurability teams, I assisted in delivering the right data to enable sufficient functionality for client demos

WORK EXPERIENCE (3/4)

Senior Data Engineer - Analytics Team

Air France Holidays | May 2022 - March 2024

As a data expert working across multiple teams at Air France Holidays—an innovative initiative enabling clients to build cost-effective dynamic holiday packages—I leveraged comprehensive customer behavior analysis to drive strategic decision-making, optimize operational efficiency, and significantly boost business performance through data-driven insights and solutions.

- Migrated legacy data pipelines to AWS using Terraform building a modern data platform
- Big Query to Redshift datawarehouse migration to significantly decrease operational costs
- Used Airflow, AWS step functions, Lambda, event bus layer & PySpark to ramp up the company's data platform
- Cloud provider costs reduction (AWS cost explorer)
- Developed a self competitiveness vs competitor benchmark workflow (AWS Step Functions)
- SEA (Meta & Google) data collection and analysis via Meta business API
- E-retail website traffic prediction using AWS forecast
- Hotel product description cards automatic generation with AWS Bedrock for conversational API. The technique used few shots learning and internal human feedback from specialist travel teams
- Data analysis regarding customer behavior

Software development instructor/engineer - startup

Nowledgeable | Nov 2021 - Apr 2022

In this early-stage ed-tech startup, I contributed twofold to equip tech teachers with state-of-the-art equipment: developing ready-made educational resources and contributing to the platform's infrastructure.

- Taught machine learning and data engineering at EFREI, AI School, Ynov, Simplon ...
- Organized hands-on learning modules
- Managed classes up to 50 students
- Contributed to the content developed on the teaching platform hosted on Azure
- Developed a custom autoscaler to dynamically adjust instance numbers during periods of high traffic (100s of requests per second across France), improving system capacity by 30%

WORK EXPERIENCE (4/4)

Data Engineer - Data integration team - startup

Padoa | Nov 2017 - Oct 2021

Tightly coupled with business teams, in a fast changing startup environment, I developed the company ETL pipelines with a growing client data integration team. I had the chance to participate in the scaling of the app from 1000 worker medical records followed to an astounding million.

- Backend web application development with NodeJS
- Homemade idempotent data injection library in python with pandas
- Relational Database administration & data analysis with PostgreSQL
- Reverse-ETL ingestion (SQL server 200x)
- Data ingestion reports
- Monitoring and automatic scaling of data ingestion streams
- Developed a custom data extraction agent with sftp/paramiko/aws s3
- Kubernetes ingestion deployment development and run

Data Scientist

ISoft | Mar 2017 - Oct 2017

Development of a software component for the AMADEA proprietary ETL for fraud hotspots detection used in banks

- Inspired by then recent research papers, I designed a new methodology according to the specifications in python
- Turned raw transaction records into a bipartite transactional graph for graph mining strategies
- Developed and tested a software prototype for Point of Compromise identification in C++
- Data exploration and analysis with Jupyter Notebook/ Pandas/ Matplotlib/ Seaborn

