

# Abdeljalil MOUSSA

Moroccan (B Work Permit), Born on November 17<sup>th</sup>, 1996  
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## EDUCATION

### Master of Science in Data Science

2019 – 2022

*EPFL – Polytechnical Federal Institute of Lausanne (Switzerland)*

Thesis: Analyzing News Data to Detect Existing & Emerging Risks for a Global Corporation (with honours, 6 out of 6)

Relevant courses: Deep Learning, Automatic Speech Recognition, Financial Big Data (6), Computer Vision, Security and Privacy, Distributed Algorithms

### Bachelor's degree in Communication Systems

2014 – 2019

*EPFL – Polytechnical Federal Institute of Lausanne (Switzerland)*

One-Year International Exchange Program at Lund University (Lunds Tekniska Hogskola) in Sweden

## SOFTWARE STACK

Java (Fluent), Python (Fluent), SQL (Fluent), C / Haskell / R (Academic), Linux / Bash Scripting / Git (Advanced),

Tensorflow, Keras, OpenCV, PyTorch, Scikit-learn, CUDA, Cloud (AWS & Azure), Spark, Docker, Dash, Spring, Palantir Foundry, Jenkins, Snowflake, Data Vault 2.0

## PROFESSIONAL EXPERIENCES

### Partners Group AG – Baar, Switzerland

04/2022 – Present

*Junior Data Engineer*

- Coordinating the ESG Project on integrating new data sources and calculations around the SFD regulation for every private equity investment (direct & indirect).
- Improving the performance of the Data Service application, which handles the majority of the data flows as well as the computation engine for the company (Java).
- Managing the data architecture for our team applications (data service and reporting) on AWS by building new solutions and retiring its on-premise counterparts.

### Tetra Laval International – Pully, Switzerland

09/2021 – 02/2022

*Data Scientist Intern*

- Working on my master's thesis in collaboration with the award-winning "EcoCloud" Lab at EPFL and Prof. Babak Falsafi
- Developing a Natural Language Processing application (topic classification, sentiment analysis and question answering) capable of detecting emerging risks and opportunities using textual data and displaying the results on Power Bi dashboards. Improving the data processes (ETL) within the team (Apache Airflow).
- Saving a six-figure investment in this project with the "Operations" team. The solution will be re-used to meet the need of multiple internal business initiatives

### Credit Suisse – Lausanne, Switzerland

02/2021 – 08/2021

*Software and Data Engineering Intern*

- Worked on building effective tools for case managers in order to help them create and design tailor-made models
- Speeding up the data analysis processes by designing Microservices in Java (with Spring Boot Applications, Elasticsearch, Eureka, Zuul, JUnit, Liquibase and H2), and creating effective global dashboards synced with internal databases (Palantir Foundry, Apache Spark, Splunk, Oracle databases and Neo4j)
- Learnt to develop data-driven initiatives, using state-of-the-art DevOps tools (Salt-Stack, Openshift, Kubernetes, Jenkins) and automating the product development (CI/CD)

### Visium – Lausanne, Switzerland

06/2020 – 09/2020

*Junior Machine Learning Engineer*

- Built and deployed ML solutions (Document Classification and Recommendation Engines) to two major clients. These projects improved the user experience, and the clients saved considerable amounts (and time) using the deployed technology. Worked closely with clients and offered them accurate and adaptable AI solutions.

### Tink – Stockholm, Sweden

06/2019 – 09/2019

*Software Engineering Intern*

- Worked on the Open Banking Project consisting of implementing banks using their Open API. Use of REST, HTTP protocols, OAuth, Proxy, and financial trusted Certificates. Successfully integrated more than 10 major banks in Europe and exchanged with their IT support teams about possible API improvements.

## SELECTED PROJECTS

### COVID-19 Survey Project

09/2020 – 02/2021

- Analyzing 14,000 responses from 13 countries in 8 languages including textual accounts of personal opinions towards the national situation around COVID-19. Project done in partnership with the DLAB (Data Science Lab) at EPFL, Graded 5.5 over 6
- Developing automatic techniques for machine translation and question answering models based on XL-NET & BERT

### Infosys Instep

07/2020 – 09/2020

- Research internship (remote) done in partnership with Infosys Bangalore (India) and Dr. Vijayraghavan
- Sped Up the risk management phase in Portfolio Optimization (Monte-Carlo) using Amplitude Estimation (Quantum Computing) through the Qiskit SDK (IBM). Implemented a long-term strategy on international markets for quadratic speed-up.

### Understanding French Voters – Data Visualization Project

02/2020 – 06/2020

- Semester Project done as part of the master's course "Data Visualization" at EPFL, Graded 6 over 6
- Implemented extensive visualizations on D3.js (JavaScript) about the correlation between socio-economic status of voters and the elections results since 2000. Learnt how to present a complex visualization project in an intuitive manner (website, video and report)

### Nordea Research & Analysis Competition, 1<sup>st</sup> Place

09/2018 – 01/2019

- Development of a new Trading System on the stock market, based on Sentiment analysis generated by several social medias and using Natural Language Processing. Established the pipeline from data gathering to automatic investment with a trading platform. Report produced and published on the LINC Association portal.
- Won the 1st prize and spent a week interning in the Nordea Front-Office and Modelling department, currently still working on enhancing this model.

## SKILLS

**Languages:** French (Mother Tongue), Arabic (Mother Tongue), English (Fluent), Spanish (Professional), German (Beginner)

**Activities:** Competitive Golf for +10 years (Junior Trophy Hassan II), Ex-Junior Entrepreneur EPFL (front-end development)