# **Abdeljalil MOUSSA**

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#### **EDUCATION**

#### **Master of Science in Data Science**

EPFL – Polytechnical Federal Institute of Lausanne

Lausanne, Switzerland

**Gradutation: March 2022** 

Relevant courses: Data Visualization, NLP, Deep Learning, Speech Recognition, Financial Big Data, Computer Vision

## **Bachelor's in Communication Systems**

June 2019

EPFL – Polytechnical Federal Institute of Lausanne

Lausanne, Switzerland

• One-Year International Exchange Program at Lunds Tekniska Hogskola, Lund (Sweden)

#### **EXPERIENCE**

## Visium S.A.

06/2020 - 09/2020

Junior Machine Learning Engineer

Lausanne, Switzerland

- Firm based at EPFL's Innovation Park producing cutting-edge tailored ML solutions and products such as AI Research Assistant or AI document management systems. Visium has more than 30 major clients in Switzerland.
- Built and deployed 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 considering their internal architecture.

Tink AB 06/2019 – 09/2019

Software Engineering Intern

Stockholm, Sweden

- Part of the Integration Team, responsible for integrating the banks to the Tink Platform, meaning allowing users to have access to their bank accounts, making transactions and any other financial needs.
- Worked on the Open Banking Project consisting of implementing banks using their Open API. Use of APIs, HTTP protocols, Proxy, and financial trusted Certificates. Successfully integrated ten major banks in Europe.
- Learnt the principles of the fintech industry (hard-working and innovative environment). Learnt how to develop APIs and many Object-Oriented paradigms. Finally, I learnt about the Agile software development approach.

Combain Mobile AB 02/2019 – 06/2019

Part-Time Software Developer

Lund, Sweden

- Company offering accurate Cell ID and Wi-Fi positioning with the world's largest database.
- Worked on developing the fingerprinting localization technique for indoor positioning using the city of Lund's crowd-sourcing data (given by real users). Used appropriate data wrangling and data visualization methods. Developed a pro-active research approach with this part-time job.
- Learnt how to use appropriate machine learning models on real-life data.

# SELECTED PERSONAL PROJECTS

### **COVID-19 Survey Project**

09/2020-Present

- 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 at EPFL.
- Developing automatic techniques for machine translation and question answering models based on BERT.

## Nordea Research & Analysis Competition (1st Place)

09/2018 - 01/2019

LINC Research and Analysis Association

Lund, Sweden

- 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 whole pipeline from data gathering to automatic investment with a platform.
- Won the 1st prize and spent a week interning in the Nordea Front-office department (largest bank in Scandinavia).

Infosys Instep 2020 07/2020 – 09/2020

 $Portfolio\ Optimization\ with\ Monte-Carlo\ Simulations\ and\ Quantum\ Algorithms$ 

Lausanne, Switzerland

- Research Internship (remote) done in partnership with Infosys Bengalore (India) and Prof. Vijayraghavan
- Sped up the risk management phase in classical Portfolio Optimization using Amplitude Estimation (Quantum Computing) through the Qiskit SDK. Implemented a long-term strategy on international markets for quadratic speed-up.

SELECTED COURSE PROJECTS

# **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 about the correlation between socio-economic status of voters and the elections results (interactive timelines and responsive synchronized plots).
- Learn how to present a complex visualization project in an intuitive manner (website, video and report).

# Analyzing Lund LTE Data - Bachelor's Thesis

03/2019 - 07/2019

- Research project at Lund University's Artificial Intelligence Laboratory. Paper published by the laboratory.
- Developed efficient algorithm predicting the RSRP (Received signal power in an LTE Network) with advanced regression models. Graded 5.5 over 6.

**SKILLS Programming:** Java, C, JavaScript, Python, R, Haskell, SQL, Matlab

**Software Stack :** Tensorflow, Keras, OpenCV, PyTorch, D3, CUDA, Git, Azure, Jira, GCP, AWS, Docker, Blender, Qiskit **Languages:** French (Mother Tongue), Arabic (Mother Tongue), English (Fluent, IELTS 7.5), Spanish (Professional)