Abdeljalil MOUSSA

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EDUCATION

Master of Science in Data Science   **Graduation: February 2022**

EPFL – Polytechnical Federal Instiute of Lausanne (Switzerland)
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 Instiute of Lausanne (Switzerland)
One-Year International Exchange Program at Lund University (Lunds Tekniska Hogskola) in Sweden

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SOFTWARE STACK

Java (Fluent), Python (Fluent), SQL (Fluent), JavaScript (prior experience), C / Haskell / Matlab & R (Academic), Linux / Bash Scripting / Git (Expert)
Tensorflow, Keras, OpenCV, PyTorch, CUDA D3, Tableau, Azure, GCP, AWS, PySpark, Qiskit, Openshift, Docker, Liquibase, Salt-Stack, ReactJS, Dash, Spring, Neo4j

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PROFESSIONAL EXPERIENCES

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.
• 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 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 considering their existing internal architecture

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.
• Learnt the principles of the Fin-tech industry (hard-working and innovative environment), integration practices (Bazel, Buildkite) and the Agile development approach

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SELECTED PERSONAL PROJECTS

Infosys Instep   **07/2020 – 09/2020**
• Research internship (remote) done in partnership with Infosys Bengalore (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.

Nordea Research & Analysis Competition, 1st 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 department (largest bank in Scandinavia)

The Finance Association EPFL (President)   **05/2017 – 09/2018**
• Worked on building long-term partnerships with companies in the Financial industry (EY, Swissquote) and organizing events such as the EPFL Trading Game, which is the largest student Trading competition in Switzerland. Increased the associative budget by 50,000 CHF

SELECTED ACADEMIC 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 (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)

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

SKILLS

Languages: French (Mother Tongue), Arabic (Mother Tongue), English (Fluent), Spanish (Professional)
Activities: Competitive Golf for +10 years (Junior Trophy Hassan II), Working on part-time projects for the Junior Entreprise EPFL (front-end development)