

# Oussama ABOUZAIID

## Data Scientist

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Born 22.08.1995



## Education

### M.Sc. in Data Science, Minor in Financial Engineering

09.2017 - 02.2019

EPFL – Swiss Federal Institute of Technology, Lausanne

### B.Sc. in Communication Systems

09.2014 - 05.2017

EPFL – Swiss Federal Institute of Technology, Lausanne

### International Exchange program

08.2016 - 05.2017

University of Illinois at Urbana-Champaign: Computer Science

## Work Experience

### Crédit Suisse, Lausanne

06.2020 - present

Data Scientist - Global Information Barrier Surveillance Team

- Improved models to prevent insider dealing and money laundering across multiple countries within EMEA, APAC and the US.
- Extended the client monitoring to the Private Banking business, and got positive feedback from Business teams.
- Created and maintained a dashboard widely used by key stakeholders to visualise the trading activity and flag suspicious clients, which decreased the client investigation time by more than half. Received positive feedback from Senior Management.

### Electronic Arts, Geneva

09.2019 - 03.2020

Data Science Intern - Marketing Analytics Team

- Master thesis supervised by EPFL Pr. Rüdiger Urbanke.
- Improve a promotion forecasting model and implement a new discount recommender “Discountify” for various EA franchises.
- Implemented a paper using a novel machine learning model to forecasting promotion uplifts (Regression-Enhanced Random Forest).
- Created a dashboard to visualise the recommender system using R Shiny, and set up scheduled deployment using Jenkins.
- Explored various sources of information (internal player data, survey results, research data, industry sources, sales data) and combined them to gain insights, supported decision-making processes and informed future strategy.
- Communicated and presented findings to key stakeholders on a bi-weekly basis.

### Swisscom, Bern

07.2018 - 01.2019

Data Science Intern - Infrastructure Analytics (INI-DNA-INF), Wireless Analytics Team (WAT)

- Processed and analyzed large amounts of daily communications data and built tools to locate cell coverage gaps.
- Developed a big data pipeline in the wireless analytics domain using Hadoop and Spark for parallel computing, indexing record using Elasticsearch, and leveraging Prometheus for log alerting.
- Provided customers with a self-service analytics dashboards to visualise the coverage in Switzerland (Tableau).
- Performed ad-hoc analysis for other teams, e.g. competitor analysis, churn analysis, etc.

## Personal and academic Projects

### Machine Learning based Recommender System (Machine Learning and Optimisation lab)

Built a Netflix-based movie recommender system that predicts user movie ratings using collaborative filtering and matrix factorization.

*Matrix factorization, Python, Scikit-Learn*

### Emotion dialog management system (Human-Computer Interaction lab)

Within the Human Computer Interaction lab (HCI), Built an NLP-based chatbot for customer beverage ordering, using sentiment analysis to express emotions. *NLTK, Google Dialogflow, requests, Flask*

### Melody generation using RNNs

Implemented a neural network by comparing LSTM, RNN and GRU models for original melody generation, based on past classical scores data, consisting of notes (pitch) and silences (tick). Consisted of partly implemented the BachProp paper.

### Stochastic Route Prediction (Swiss Data Science Center & EPFL)

Built a predictive model of public transport delay in Switzerland, using 1 year historical data from SBB (Swiss railways) by fitting stochastic models for delays. (Presentation) *PySpark, Pandas, Shortest Path algorithms (BFS, Dijkstra), Data Visualization*

## Relevant Coursework

Machine Learning - Data Analysis - Deep Learning - Statistics - Data Visualisation - Algorithms - Data Science for Business - Computer Security & Privacy - Artificial Neural Networks - Statistics for Data Science - Corporate Finance - Financial Econometrics - Investments

## Software Stack

Python, SQL, R, R Shiny, PySpark, Tensorflow, Keras, Tableau, Palantir Foundry, UNIX, Bash scripting, Git, Tensorflow, Keras, Flask

## Languages

English (fluent), French (native), Arabic (native)