Oussama ABOUZAID
Data Scientist

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Born 22.08.1995

Swiss C work permit

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

Expedia Group, Geneva **12.2022 - present**
Data Scientist I, Analytics - Hotel Entreprise and Partnership team
- Collaborated with Account Managers, proactively proposing data-driven solutions to capture incremental revenue opportunities.
- Developed a package compliance framework to identify major contractual breaches by partners (>$200M), encompassing data prototyping, collection, implementation, and self-serve setup. The framework is used daily by over 50 account managers.

Crédit Suisse, Lausanne **06.2020 - 11.2022**
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 quality of cellular coverage in Switzerland (Tableau).
- Performed ad-hoc analyses 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, PySpark, Hive, Tensorflow, Keras, Tableau, Git, SQL, R, R Shiny, Palantir Foundry, UNIX & Bash scripting, Flask

Languages

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