Adrian **Löwenstein**

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French Nationality | Born 21.11.1993

Technical Skills

Certification Azure Data Engineer Associate [DP-200 + DP-201]

Programming Python [Pytorch, Keras, Pandas, Spark, Scikit-Learn, Matplotlib, ...] • C • C++ • Matlab • SQL • Linux [bash] Devops Practices [Git, Gitlab CI/CD] • Javascript [D3.js]

Computer Science Classical Machine Learning • Deep Learning • Natural Language Processing [Transformers, Spacy] Time Series • Computer Vision • Reinforcement Learning • Probabilistic Inference [Gaussian Processes, Bayesian Opt. , VAE]

Electrical Engineering • Model Predictive Control • Control Theory • Computational Optimisation Electrical Grid Control & Modelling • Electricity Market • Energy Storage • Energy Generation

Professional Experience

Quantmetry
Paris, France | Sept 2019 - Today

Data Scientist

Working as a Data Scientist consultant for various projects and companies. Developing solutions and interacting extensively with clients.

NLP : Developing, for a medical news company, tools enabling the profiling and clustering of doctors by using NLP techniques and dimension reduction on the content of the media.

NLP : Creation of supporting material, practical exercises for a formation on latest NLP subjects (BERT, Embdedings, , ...). Formation given externally to a data scientist audience.

Time Series ans Supply Chain : Developing and deploying for a wholesaler, of a tailored solution in supply. Including a sales prediction module on thousands of items, and a supply optimisation module. Using Deep Learning approaches and constrained optimisation methods.

Data Engineering : Developing infrastructures for the French Ministry of Health in support of the internal Covid-19 Data platform. Including Gitlab CI/CD pipelines, Docker runners, SFTP servers.

Computer Vision : Developing, for a fashion startup, image segmentation models by using Computer Vision techniques and Deep Learning on Pytorch. Deployed with Django APIs on Google Cloud Platform.

Ecole Polytechnique Fédérale de Lausanne | EPFL
Lausannne, Switzerland | 2015 - 2018

Teaching Assistant

Working as a Teacher Assistant for several Professors during my studies at EPFL

Commissariat à L'Energie Atomique | CEA
Le Bourget du Lac, France | June 2016 - Aug 2016

MSc Internship

Internship at *Institut National de l'Energie Solaire* (INES) - Development and validation of energy management strategies in Smart Grids. Study of battery models and implementation in a battery simulator. Evaluation on a Solar Microgrid of battery charging strategies.

Airbus Helicopters UK
Oxford, United Kingdom | June 2011 – July 2011

Internship

Introductory Internship done between the French Baccalaureate and the beginning of my studies.

Education

Imperial College London
London, United Kingdom | Sept. 2019

MSc in Computing | **Machine Learning** | obtained with Merit

Ecole Polytechnique Fédérale de Lausanne | EPFL
Lausanne, Switzerland | July 2018

MSc in Electrical Engineering | **Energy & Smart Grids Science** | Average : 5.31 / 6.0

Eidgenössische Technische Hochschule Zürich | ETHZ
Zürich, Switzerland | Aug. 2015

Exchange in 3rd Year of BSc

Ecole Polytechnique Fédérale de Lausanne | EPFL
Lausanne, Switzerland | Feb. 2016

BSc in Electrical Engineering | Average : 4.8 / 6.0

Soft Skills

Qualities Reasoning • Analysis • Adaptability • Curiosity • Creativity • Team Spirit

Language French [Native] • English [C1] • German [B2]

Extra Curicular

Associative EPFL Electrical Engineering Students Association • EPFL Instagram Student Photographer [@epflstudents]

Others Photography [Digital, Analog] • Video Editing • Travel Biking • Hiking • Skiing • Discovery Travelling [Peru, China, Iran]

Data Science Projects

Gaussian Processes for Optimal Sensor Position
Imperial College, London | Summer 2019

Master Thesis

Employment of a **Gaussian Process** model to calculate the optimal spatial positioning of sensors to study and collect air pollution data in big cities. Validation with Data Assimilation. Big Data Problem. Imperial College London **Data Science Institute**.

NLP Challenge - SemEval 2019 Task 6
Imperial College, London | Spring 2019

Codalab Competition | Github Repository

Classification of Offensive Tweets. Globally **obtained the 5th best results**. Use of state of the art methods such as GRU, LSTM, RNN or CNN.

Tweet Awareness - Data Analysis
EPFL, Lausanne | Autumn 2017

Group Project | Data Story

Data Analysis Project on how to measure the **awareness** of people about dramatic events around the world and how to correlate it to **cultural distances**. Data **extraction** from twitter using Python (Selenium, BeautifulSoup). Data **analysis** using Python (Pandas, Sklearn). Data **visualisation** using Javascript (D3.js). Group Project created in the context of the Applied Data Analysis course of Pr. R. West.

Smart Grid Projects

Provision of Multiple Services to the Grid with Plug-In-Electrical-Vehicles
EPFL, Lausanne | Spring 2018

Master Thesis | Poster of the Project

Using Electrical Vehicles for providing services to the grid, such as Frequency Regulation. Optimisation problem using real transportation data to determine the regulation capacity for the electricity markets. Using Matlab, Gurobi solver and YALMIP. Supervised by Pr. C. Jones.

Robust restoration in DG-incorporated distribution networks
EPFL, Lausanne | Autumn 2017

MSc Semester Project

Formulation and implementation of the **Restoration Problem** in Electrical Grid, a Mixed-Integer-Non-Linear Optimisation Problem. Implementation using Matlab and the Gurobi solver. Supervised by Dr. R. Cherkaoui.

ETR applied to Fault Detection in Power Networks
EPFL, Lausanne | Spring 2017

MSc Semester Project | Conference Paper

Investigating the physical application of the Electromagnetic Time Reversal (ETR) principle, in the context of fault detection in **Electrical Grids**. Supervised by Pr. F. Rachidi. Three weeks residency spend at **Amir-Kabir University in Tehran** for this project.

H2O2 Fuel Cell and Electrolyser Analysis and Monitoring
EPFL, Lausanne | Spring 2016

BSc Project | EPFL Microgrid

Implementation of a **Monitoring System** (in LabView) for a Fuel Cell and Electrolyser in the context of a Lab Microgrid. Supervised by Pr. M. Paolone.