

ADRIAN LÖWENSTEIN

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French Nationality | Born 21.11.1993

TECHNICAL SKILLS

Computer Science Classical Machine Learning • Deep Learning [CNN, GAN, RNN, LSTM] • Reinforcement Learning
• Computer Vision • Probabilistic Inference [Gaussian Processes, Bayesian Optimisation, VAE] • Natural Language Processing

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

Programming Python [Pytorch, Pandas, Scikit-Learn] • C • C++ • Matlab • \LaTeX • Git • Javascript [D3.js]

EDUCATION

Imperial College London London, United Kingdom | Sept. 2019
MSc in Computing | Machine Learning | Ongoing Studies

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

PROFESSIONAL EXPERIENCE

Ecole Polytechnique Fédérale de Lausanne | EPFL Lausanne, 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.

DATA SCIENCE PROJECTS

Gaussian Processes for Optimal Sensor Position Imperial College, London | Summer 2019
Master Thesis | Ongoing Project
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.

Speech Recognition Challenge - Network Data Science EPFL, Lausanne | Autumn 2017
Kaggle Competition | 🐙 Github Repository
Network Tour of Data Science Project. Classifying noisy audio commands. Cleaning and cutting of Audio Signals. Feature Extraction using mel-cepstral cepstrum. Building of a graph and extraction the fiedler vectors from the Laplacian to cluster the graph and classify the audio signals.

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.

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 [Final Cut Pro] • Hiking • Skiing • Discovery Travelling [Peru, China, Iran]