

ADRIÁN AUGUSTO FERRER ORGAZ

DATA SCIENTIST AND MATHEMATICS ENGINEER

PROFILE

Data Scientist and Machine Learning engineer with a keen interest in Artificial Intelligence and Data Mining. Looking forward to growing in multidisciplinary teams through high attention to detail and commitment.

SKILLS

- **Machine Learning.**
- Data Analysis and Statistics.
- Data visualization.
- Programming.

Programming Languages:

Python, R, Matlab, Wolfram Mathematica, HTML5, CSS3, C#, Dart, C++.

Frameworks/Systems:

Anaconda, Keras, PyTorch, scikit-Learn, NumPy, Streamlit, VisualStudio, MS Office.

CERTIFICATIONS

- IELTS Band 8 CEFR C1 Level Certification (2022).
- Machine Learning Scientist with Python, Datacamp (2020).
- Machine Learning Fundamentals with Python, Datacamp (2020).

LANGUAGES

- Spanish (native).
- English (advanced C1).
- French (beginner A1).

OTHER SOFTWARE

- Adobe Photoshop (intermediate).
- DaVinci Resolve (beginner).
- Adobe Premiere (beginner).
- Unity (beginner).

CONTACT



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EDUCATION

Instituto Tecnológico Y de Estudios Superiores de Monterrey, México

BS Data Science and Mathematics Engineering.

- August 2019 – 2023 (present).
- Beca al Talento Académico (2019).

École Polytechnique Fédérale de Lausanne (EPFL), Switzerland

Exchange Semester in Data Science and Computer Science Master program courses.

- Fall Semester 2022– 2023 (present)
- Highlighted courses taken:
 - [Applied Data Analysis \(CS-401\)](#).
 - [Machine Learning \(CS-433\)](#).
 - [Applied Machine Learning \(MICRO-455\)](#).

EXPERIENCE

"Hacking the Oscars data story" (2022)

"Hacking the Oscars" is a project developed as part of the [Applied Data Analysis EPFL course](#). Elaborate data wrangling performed on [CMU movie summary corpus dataset](#) along with IMDb datasets to understand movie success through a data-driven approach. Statistical differences between highest rated and lower rated movies are explored. Use of unsupervised learning techniques such as Latent Dirichlet Allocation for movie summary plots for feature engineering and interpretation. Participated actively in code and analysis design, developed the [presentation web page \(data story\)](#).

"Digital Signature (DS) scheme implementation application" (2022)

Project developed under the supervision of non-lucrative Mexican organization Teletón. A multidisciplinary project with the objective of making cryptographic technology accessible for non-technical users. Main designer of code, app functionality and user cycle. Developed the main logic and Python code blocks to be used in the final application, assisted in UI and app design. The final product consists of the app implementation of the DS algorithm and a promotion [dummy web page](#).

"E-commerce vehicle capacity vehicle routing problem (CVRP) optimization" (2021)

Project developed under the supervision of Mexican nationwide department store Coppel. An alternate solution methodology is proposed for NP-hard CVRP using clustering, local optimization algorithms and regular travelling salesman problem.

"3rd place in an NDS Cognitive Labs sponsored machine learning team competition, HackMx" (2021)

Fraud detection simulation in an e-commerce web application. Led modeling and machine learning tasks. Designed the benchmark and supervision of model training. Use of anomaly detection specific and traditional classification algorithms.

"Semi-supervised anomaly detection based on autoencoders" (2020–2021)

Supervision and evaluation of various trained models, development of code, Neural Network architectures, and code execution on several environments. Development under supervision of Ph.D. Miguel Ángel Medina Pérez.

"Red Neuronal Multicapa para predecir la defunción en casos de COVID-19." (2020–2021)

Presented in 51 Congreso de Investigación y Desarrollo, Tecnológico de Monterrey. Prediction of death probability for a patient based on certain comorbidities and other factors. Conceptualized as an auxiliary tool to aid in prioritizing medical attention. Led code architecture and web app development. A [streamlit web app](#) is presented with the results of the model iterations.

COMPLEMENTARY SKILLS

- Advanced correlation and multivariate linear regression analysis.
- Control theory, LTI system analysis.
- Time-Embedding topological data analysis.
- Ruin theory, Crammer–Lundberg model analysis.
- Beginner web, and web app development.

ONLINE PORTFOLIO



<https://adrianfo-16.github.io/Portfolio/>