

David Pérez Carrasco

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Leveraging analytical and critical thinking skills, I develop impactful Machine Learning models through rigorous research, advancing the field of AI. Committed to perfection, I relentlessly pursue optimal solutions. Ambitious, detail-oriented, and determined, driven to excel in AI/ML research at a world-leading company.

Professional Experience

AI & ML Researcher at Universitat Pompeu Fabra | Internship

Barcelona, Spain
Jul 2023 - Mar 2024

- Developed a simulator for sequential decision-making problems, enabling the representation of deterministic actions.
- Implemented state-of-the-art RL in linearly solvable MDPs, benchmarking efficacy against established methodologies in complex decision frameworks.

Education

Universitat Pompeu Fabra - Mathematical Engineering in Data Science

Barcelona, Spain
Sept 2020 - Jul 2024

Degree conducted exclusively in English.

Grade: 8.63 | Honors: Introduction to Programming, Introduction to Network Science, Discrete Mathematics, Data Structures & Algorithms, Object-Oriented Programming, Algorithm Design, Probabilistic Graphical Models, Information and Codification Theory.

University of British Columbia – Exchange Program

Vancouver, Canada
Sept 2022 - Dec 2022

34th best university worldwide according to 2023 [QS ranking](#) and 19th in Data Science.

GPA: 3.6 | Courses: Relational Databases (A), Machine Learning and Data Mining (A-), Finding Relationships in Data (A-) and Artificial Intelligence (B).

Academica International Studies - American High School Diploma

Miami, United States
Sept 2016 - Jun 2020

Graduated with honors. GPA: 3.17

United States History (A), Economics (A), Concepts of Engineering & Technology (A).

Projects

Deep Learning Meta-model for Anomaly Detection | Python (Pytorch, Pandas, Streamlit)

Dec 2023

- Developed DL meta model combining multi-sequence LSTMs and Transformers, detecting over 50,000 anomalies, saving 1 billion liters of water.

SRGAN for Image Super Resolution | Python (Pytorch, Numpy)

Jun 2023

- Boosted image quality by 4x and reduced noise through SRGAN implementation.

Deep Learning for Cryptanalysis | Python (Pytorch, Pandas, Numpy)

May 2023

- Decoded corrupted files training and testing CNNs and LSTMs.

Apache Spark for Big Data – Tweets filtering | Apache Spark, Maven, AWS (S3 & EMR)

Apr 2023

- Filtered real-time tweets with parallel computation and cloud computing storage.

Relational Database – Football in Data | SQL, PHP, JavaScript

Nov 2022

- Developed and deployed a football database alongside public webpages, employing precise SQL queries, PHP scripting, and JavaScript.

Machine Learning for Customer Segmentation and BI | Python, Excel

May 2022

- Prepared IoT data and trained machine learning models for customer identification.

Remarkable Activities

Finalist in the 2023 AB Data Challenge

Barcelona, Spain
Dec 2023

- Predicting water consumption and detecting anomalies with a DL Meta-Model.

Contestant at the 2022 IPCP Southwestern Europe Regional Contest

Milan, Italy
Apr 2022

- Solved several programming problems representing the UPF.

Languages

Spanish (Native), Catalan (Native), English (C1 – Cambridge English | February 2022), French (Basic).

Digital Skills

SQL, Python, R, MATLAB, Excel, Tableau (**Advanced**), Java, JavaScript, C/C++, Julia, PHP, AWS, Agile, Jira (**Intermediate**), Amazon Cluster, Maven, Apache Spark, MPI, Cuda, RDS, Hadoop (**Basic**).

Honors & Awards

- Academic distinction issued by the Catalan Government for my outstanding results in PAU.
- Placed in the honor roll for my outstanding academic performance in 2018-2019 academic year.