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# Alberto Fernández de Marcos Giménez de los Galanes

Highly motivated and hardworking engineer with three years of consulting experience building ML solutions for international companies from industry, telecom and retail sectors.







Interested in Machine Learning & Statistics methodological research and its applications in social fields, specially education.

Current career goal is to move into mathematical research and teaching, in the specialization of statistics/ ML at university and secondary level.

## EDUCATION

Sep 13 - Feb 18	<b>BSc AEROSPACE ENGINEERING</b> Polytechnic University of Madrid Aerospace Systems & Air Navigation	Final Degree Project · Queue behavioural patterns for passengers at airport terminals: A Machine Learning approach
Sep 18 - Jun 21	<b>MSc STATISTICS FOR DATA SCIENCE</b> University Carlos III Madrid Language: English	· Probability Theory, Stochastic Processes, Inference · Mathematical Programming (Linear and non-linear) · Dissertation: Unveiling of useful modifications for goodness-of-fit tests (Nonparametric statistics)
Sep 20 - Jun 21	<b>MA IN TEACHER TRAINING FOR MATHEMATICS SECONDARY EDUCATION</b> Rey Juan Carlos University	· Educational Innovation (PBL, Flipped Classroom) · Didactics of Mathematics · Educational Research: Computational Thinking

## WORK EXPERIENCE

Sep 19 - Sep 20	 Artificial Intelligence and Data Science Consulting	<b>DATA SCIENTIST</b> BCG GAMMA	· Time series forecasting, using both ARIMA models and supervised ML ensemble models · Feature engineering for traffic growth model in a telecom network, based on surrounding area features · Technologies: Python (geodata), SQL
Dec 18 - Sep 19	 Artificial Intelligence and Advanced Analytics for Spanish top retailers	<b>DATA SCIENTIST</b> Kernel Analytics	· Product assortment optimization application (API) - Time series analysis module (seasonality, FFT) - Sales history replication (nearest neighbors) - Basket analysis (association rules) · Technologies: SQL, Python (Pyomo, Flask), CBC, GCP
Jul 18 - Dec 18	 Machine Learning and predictive modeling in A400M reliability project (AIRBUS DEFENCE & SPACE)	<b>DATA SCIENTIST</b> SOGETI · Part of Capgemini	· Machine Learning Modeling for maintenance issues · Data Engineering and ETL pipelines · Front-End Design to show models results · Technologies: Python, SQL, Spark, JavaScript
Mar 17 - Mar 18	 Machine Learning, Data Science applied to agriculture, insurance and banking	<b>DATA SCIENTIST</b> cubenube - bynse	· Supervised machine learning and web scraping · Data cleaning, transformation and featuring · Visualization and customer presentation · Technologies: R, Python, SQL, QGIS, Java
Sep 17 - Jun 18	 Extracurricular High School Teacher	<b>CODING - IT TEACHER</b> DIQUIEXPERIENCE	· Logic Programming Introduction · Graphic Design and Photoshop · IT Projects; applications, games · Technologies : Scratch, Python and Adobe Photoshop
Sep 16 - Jun 17	 Complex Systems Approach to Finances	<b>COLLABORATIVE RESEARCH PROJECT</b> Mathematics Department	Stock market performance and influence analysis Statistical Mechanics and Stochastic Processes Non-linear regression applied to high-frequency data Technologies: Matlab, R, Fortran, Mathematica

## SKILLS

Teaching	Contribution to the design and preparation of training programs related to Python
Team working	Data Science team projects management. SCRUM methodology for project development.
Willingness to learn	Self-taught in design and AutoCAD, and electronic projects with Arduino. Machine learning and coding in several programming languages self-learning.
Organisation	Data Science projects repositories framing. Collaborative Development.
Time Management	Objective-based projects meeting delivery deadlines. Self-employed projects based on personal objectives.

## LANGUAGES

SPANISH	Native Speaker
ENGLISH	C1 Certificate ISE II

## IT & DATA SCIENCE

	BASIC	MEDIUM	HIGH
Python	Machine learning, Deep Learning, API development, multipurpose scripting		
R	Statistical analysis, visualization (ggplot)		
SQL	Data acquisition, storing and transformation within relational databases.		
Git	Collaborative Software Development (Git Flow, Releases, CI, Doc), AI Project Structure		
Statistics	Multivariate Analysis, Probabilistic Applied Models, GLM, Bayesian Inference		
Apache Spark	Distributed Machine Learning and Computation. HDFS storing.		
Agile	SCRUM and Kamban project management methodologies		

## PUBLICATIONS & CONFERENCES

Ruiz López G. & Fernández de Marcos A. (2018). Evidence for criticality in financial data. *The European Physical Journal B*, 91.  
<https://link.springer.com/article/10.1140/epjb/e2017-80535-3>

Rodríguez-Sanz A., Fernández de Marcos A., Pérez-Castán J., Gómez F., Arnaldo R. & París Loreiro A. (2021). Queue behavioural patterns for passengers at airport terminals: A machine learning approach. *Journal of Air Transport Management*, 90.  
<https://doi.org/10.1016/j.jairtraman.2020.101940>

## EXTRACURRICULAR ACTIVITIES

MUSIC STUDIES	Clarinet	Medium Level / 2004 - 2013
THEATRE COMMISSIONER	Theatre Group RONCALÁ in Alcalá Residence Hall	
DATATHON UNIVERSITYHACK 2019	First Round Finalists Estimation of the duration of visits to Real Estate online advertisements	