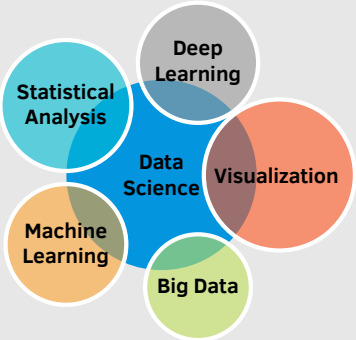# MIGUEL ESPADA

Data Scientist

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in /in/miguel-espada-ruiz-754776132

Skills

Overview

Programming

Python • SQL

SAS • PowerBI • Tableau

Scala • AWS • R

Gephi • Matlab • VBA • LaTeX

Education

| 2019 - Now | **M.Sc., Data Science and Big Data** | U-TAD, Spain |

- Machine Learning (SVM, Decision Tree, Random Forest, Naive Bayes,K-means, Logistic Regression, Dendrograms,..)
- Deep Learning (Neural Networks, MLP, CNN , RNN , NLP , Image Processing, ..)
- Big Data (Spark, Hadoop, Cloud: AWS, Azure, ..)
- Visualization (PowerBI, Tableau, Kibana, seaborn, matplotlib, plotly, ..)

| 2017 - 2019 | **M.S., Business Consultory** | ICADE- ICAI, Spain |

| 2016 - 2017 | **MSc., Theoretical Physics** (8.0) | UAM - IFT CSIC, Spain |

| 2012 - 2016 | **Bachelor in Physics** (7.8) | Universidad Complutense de Madrid, Spain |

Experience

| Oct 2017 - Now | **Data Scientist** | Management Solutions |

- Ful development of a predictive model **(admission score model)** for a retail portfolio:
  - **Data preparation**: EDA, Data cleansing , Feature engineering , ...
  - **Univariate Analysis**: Skewness, Kurtosis, Outliers, Box plots, Variance, Herfindahl Index, ..
  - **Bivariate Analysis**: WOE, IV , ANOVA , Correlation, Clustering , ...
  - **Model development**: Stepwise Logistic Regression, AGB/KGB models, Reject Inference, Score card calibration ,..
  - **Model validation**: GINI, KS, accuracy, PSI, AUROC , ...
- Statistical model construction for Credit Risk Quantification:
  1. PD (Probability of Default): Lifetime, Forward Looking, SICR,..
  2. LGD(Loss Given Default): segmentation, long run, ELBE, maturity period,..
  3. EAD(Exposure at Default): CCFs, On-Balance, Off-Balance..
- Implementation of methodological changes due to IRB repair programme (new default and new EBA guidelines) on Credit Risk Models.
- Data model construction with all the required estimation fields: Definition (UTPs, probation period..) and implementation.
- Capital computation engine: Implementation of the motor, input/output validation and impact analysis of the parameter re-estimations.
- Validation and audit support: Review of the raised issues, development of responses and monitoring of recommendations.
- Reporting and documentation: Improvements and evolutives for the current reporting process.

Publications

Miguel Espada, Rafael L. Delgado ,Antonio Dobado ,Felipe J. Llanes-Estrada, and Iván León Merino, "Collider production of electroweak resonances from γγ states" J. High Energ. Phys. (2018) 2018: 10.