Miguel Fernandez Montes

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EDUCATION

University of California, Berkeley — Berkeley, CA
MEng Industrial Engineering and Operations Research **GPA: 3.93/4** — Aug. 2019 - May 2020
Specialization in Data Science, Statistical Modeling, Machine Learning and Optimization

Technical University of Madrid — Madrid, Spain
MS Industrial Technology Engineering **GPA: 9.03/10** — Sep. 2017 - Jul. 2019

Technical University of Madrid — Madrid, Spain
BS Industrial Technology Engineering **GPA: 8.11/10** — Sep. 2013 - Sep. 2017
Graduated in the **top 3%** of the class

SKILLS

Technical skills: Python, numpy, pandas, scikit-learn, statsmodels, pytorch, tensorflow, keras, matplotlib, SQL, R, dplyr, ggplot2, Hadoop, Spark, BASH

Research interests: Experimental Design and Analysis, Computational Statistics, Deep Learning, Time Series Analysis

EXPERIENCE

159 Solutions, Inc. — San Mateo, CA
Analytics Associate — Jul. 2020 - Present

- Coordinated on-shore and off-shore teams to support the operation and development of a custom **reporting** & **CRM** platform serving **100+ users**
- Worked directly with Project Manager and client to develop sales force performance analyses leveraging an **AWS Data Warehouse** and **SQL**

Technical University of Madrid — Madrid, Spain
Machine Learning Research Assistant — Nov. 2018 - Jul. 2019

Funded by Collaboration Grant from the Technical University of Madrid

- Processed gait signals from medical trials using Python to build **time-frequency data representations**
- Investigated **machine learning models** for neurodegenerative disease diagnostics
- Trained and validated deep learning models (1D and 2D **Convolutional Neural Networks**) with **keras**

Stratebi Business Solutions — Madrid, Spain
Business Intelligence Intern — Feb. 2018 - Jul. 2018

- Constructed **data warehouse** to streamline the analysis of **1M+ records** from Supply Chain data using **SQL** & Online Analytical Processing tools
- Implemented Extraction, Transformation and Loading (**ETL**) processes to integrate sales and forecast data, reducing processing time by **98%**
- Trained **20+** professionals from the Inspection and Certification industry in **Microsoft PowerBI**

PROJECTS

AI for Urbanism: Analysis of urban outdoor areas | Spacemaker — Sep. 2019 - May 2020

Master of Engineering Capstone Project in partnership with Spacemaker AI

- Developed **data pipeline** to retrieve and process urban planning data from **AWS** S3
- **Engineered** and extracted geometric **features** from architectural layouts to create a data set of urban spaces
- Conducted unsupervised learning methods (**principal component analysis** and **clustering**) to categorize outdoor spaces

Review and comparison of subset selection methods for linear regression — Mar. 2020 - May 2020

- Implemented a discrete first-order optimization method and a mixed integer program for best subset selection in **Python**
- Ran **120+** model fitting experiments across a wide range of synthetic and real datasets
- Analyzed the **statistical accuracy** and **support recovery** of several statistical learning methods for exact and approximate subset selection e.g. the **Lasso**, relaxed Lasso and best subset selection