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# Isabel María Villalba Jiménez

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Github: **mabelvj**
StackOverflow: **mabel-villalba**
Udacity: **isabelmaravillalbajimnez**

## SKILLS

• Python • R
• Regular Expressions
• Scrapping • SQL
• Matlab

### PYTHON

• Scikit-learn • Pandas
• Numpy • statsmodels
• Matplotlib • Seaborn
• Scrapy • BeautifulSoup
• Quantopian • Backtrader
• Jupyter-Notebook
• Tensorflow

### DATA SCIENCE

• Statistical analysis
• Time Series
• Deep learning

### OTHER

• Amazon Web Services (AWS) EC2
• Quantopian
• Linux • GitHub
• LaTeX• markdown

## LANGUAGES

| | |
|---|---|
| **Spanish** | native |
| **English** | full-proficiency Cambridge Certificate in Advanced English - CAE (C1) (2012) |
| **French** | basic |

## EDUCATION

**MSc in Photonics** *2013-2014*
Polytechnic University of Catalonia (UPC)
Institute of Photonic Sciences (ICFO), UAB, UB

**Telecommunication Engineering (BSc + MSc)** *2005-2012*
University of Malaga

### COURSES

**Data Analyst Nanodegree** , *November 2016 - June 2017*
Udacity facebook mongoDB

**Machine Learning Engineer Nanodegree** , *July 2016 - November 2016*
Udacity Google

**Machine learning Course** 2016 Stanford University, Coursera
Certificate: ***source***

## EXPERIENCE

**Data Scientist & Python Developer (Independent Contractor)** *April 2017 - present*

- **LISTedTECH** *January 2019 - present | Remote*
  - Development of a tool for scrapping information about universities. Data cleaning for database update. Scrapy. Regular expressions.
- **Windsor AI** *November 2018 - present | Remote*
  - TV attritbuttions and ROI report generation using R and PostgresSQL.
- **Arbuckle Capital** *September 2017 - present | Remote*
  - Algorithmic trading system in (Quantopian, Backtrader (Python)). Prediction of bull-bear periods and cluster periods of volatility. Used GARCH models to predict volatility. Portfolio selection.
- **SerpicoDEV** *June 2017 - September 2017 | Remote*
  - IImplemented a predictor system im Python to determine prices changes in commodities from markets of the U.S.

- **Mentor and Reviewer** Udacity
  - **Classroom Mentor** *April 2017 - present | Remote, part-time*
    * Provided on-demand support to the **Machine Learning Nanodegree (MLND)** and the **Data Analyst Nanodegree (DAND)** students.
    * 120 people under mentoring with **average rating of 4.7**
  - **Project Reviewer** *April 2017 - present | Remote, part-time*
    * Helped students of the **Deep Learning Nanodegree Foundation** and the **Artificial Intelligence Nanodegree** in projects related to Neural Networks, Reinforcement Learning and Statistical Analysis.
    * 750+ projects reviewed with **average rating of 4.93**

**Predoctoral researcher** *October 2015 - October 2016 | Barcelona*
Optical Communications Group (GCO)
Polytechnic University of Catalonia (UPC)

- Developed Python and Matlab scripts for simulation of optical devices
- Simulated wavelength shifter for optical networks units with 54dB side band rejection
- Designed new devices for highly efficient networks

# PROJECTS - SOURCE

- **Contributions** *source*
  - **Scikit-Learn**
    Fixed bugs and implemented new features.
  - **Pandas**
    Documented **pandas.DataFrame.boxplot** function.
  - **StackOverflow -** *profile*
    Answered questions related to python, pandas, sklearn, matplotlib, numpy, ggplot

- **Stocks Dashboard in Bokeh -** *source* *May 2018*
  - Display time series automatically using Bokeh (Python).
  - Easy plots arrangment and format through dictionary of parameters.

- **Right Whale call recognition using Convolutional Neural Networks -** *source*
  *November 2016*
  - Training of Convolutional Neural Networks (ConvNets) models widely used for character recognition (LeNet5) for audio recognition.Detected up-calls with 0.95 Area Under the Curve (AUC).
  - Tensorflow, scikit-learn, python, pandas, numpy, csv, matplotlib