# Isabel María Villalba Jiménez

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# **SKILLS**

### **DATA SCIENCE**

- Statistical analysis
- Supervised learning
- Unsupervised learning
- Reinforcement learning
- Deep learning
- t-test ANOVA
- chi-squared test
- A/B test

# PROGRAMMING LANGUAGES

- Python R
- D3.js AngularJS
- Matlab SQL C++

#### **OTHER**

- Scikit-learn Pandas Numpy
- Matplotlib Seaborn ggplot
- Tensorflow Ipython-notebook
- Amazon Web Services (AWS) EC2
- Linux Ubuntu GitHub
- ATEX• markdown Rmarkdown

# LANGUAGES

Spanish n

native

English full-proficiency

Cambridge Certificate in Advanced English -

CAE (C1) (2012)

French basic

# **EDUCATION**

# **DATA ANALYST NANODEGREE**

**UDACITY facebook**. ♥ mongoDB , November 2016 - June 2017

#### MACHINE LEARNING ENGINEER NANODEGREE

UDACITY GOOGLE, July 2016 - November 2016

#### **MSC IN PHOTONICS**

POLYTECHNIC UNIVERSITY OF CATALONIA (UPC) 2013-2014
Institute of Photonic Sciences (ICFO), UAB, UB

## TELECOMMUNICATION ENGINEERING (BSC + MSC)

UNIVERSITY OF MALAGA 2005-2012

### COURSES

#### MACHINE LEARNING COURSE

ANDREW NG

STANFORD UNIVERSITY COURSERA 2016

Certificate: https://www.coursera.org/account/accomplishments/certificate/BDUV2MJT2P7T

# PROJECTS - SOURCE

### **DATA ANALYST NANODEGREE**

- Health spending vs Life expectancy graph using D3.js- source June 2016
  - D3.js, JavaScript, HTML, CSS, storytelling
- Test a Perceptual Phenomenon source December 2016
  - Performed statistical test to analyze the Stroop effect, a classic result of experimental psychology.
  - t-test, ggplot, R, rmarkdown

# MACHINE LEARNING NANODEGREE

- 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

# **EXPERIENCE**

## **UDACITY CLASSROOM MENTOR**

- UDACITY April 2017 present | Remote, part-time
  - Provided on-demand support to the Machine Learning Nanodegree (MLND) and the Data Analyst Nanodegree (DAND) students.
  - 90 people under mentoring with average rating of 4.6

## **UDACITY PROJECT REVIEWER**

UDACITY January 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.
- 250+ projects reviewd with average rating of 4.92
- Python, numpy, pandas, scikit-learn, csv, matplotlib, jupyter-notebook

#### PREDOCTORAL RESEARCHER

OPTICAL COMMUNICATIONS GROUP (GCO)

- POLYTECHNIC UNIVERSITY OF CATALONIA (UPC) October 2015 October 2016 | Barcelona
  - 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