David Charte

Data scientist

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Skills

Data scientist with expertise in unsupervised and supervised deep learning, image processing, classification problems and a strong mathematical foundation.

Learns fast · Loves teaching · Team player · Organized and meticulous

Speaks Spanish (native) · English (advanced) · French (intermediate) · Swedish (basic)

Technologies

ML Tensorflow · Keras · Pytorch · Scikit-Learn · Apache Spark · NVidia CUDA · Microsoft AzureML

Languages Python · R · Ruby · C++ · C · Shell · SQL Web HTML · JavaScript · CSS · RWD · Vue.js

Systems Linux/UNIX · Docker · NGINX Tools Git · GitHub · LATEX · VSCode

Experience

2018–present PhD candidate, University of Granada, supervisors: Francisco Herrera & Francisco Charte.

Lecturer training contract under Spanish FPU program ref. FPU17/04069, defending thesis soon.

- Main topic: Finding alternative representations for data through deep learning techniques
- Published 10 JCR journal articles (7 in Q1) and 7 software packages
- Collaboration: Repsol, optimization of refinery processes (machine learning and autoencoders)
- Collaboration: ArcelorMittal, semantic segmentation of metallographic microstructures
- o Directed bachelor's thesis: Automatic melody synthesis with Google Magenta
- o Directed bachelor's thesis: Neural search for COVID-19 detection in chest X-rays
- ∘ Published a 5-part free online course ♂ (in Spanish) on linear algebra and dimensionality reduction

2020–present Online course author and lecturer, CampusMVP, Spain.

Course on Data Science and Machine Learning using Python and R, with video-based and written lectures

2018 Researcher, University of Granada, Spain.

Contract with BBVA-founded project BigDaPTOOLS. Development of data preprocessing libraries in R

2016–2018 **Undergraduate researcher**, University of Granada, Spain.

Analysis of unsupervised deep learning techniques, extraction of multi-view models for supervised learning

Education

2017–2018 M.Sc. in Data Science and Computer Engineering, University of Granada, Spain.

2012–2017 B.Sc. in Computer Science, University of Granada, Spain: 9.40/10.

- Graduated with best academic record in class
- Co-founded LibreIM ☑ , a student community for Mathematics and Computer Science
- 2012–2017 B.Sc. in Mathematics, University of Granada, Spain: 9.04/10.
 - 2017 Intl. Summer School on Deep Learning, Deusto University & Rovira i Virgili University.
 - 2014 A practical approach to Data Science and Big Data, Intl. University of Andalusia (UNIA).
- 2007–2012 **Project for detection/stimulus of mathematical talent (ESTALMAT)**, SAEM-Thales, Spain.

Projects

- 2021 Slicer (convolutional), Convolutional autoencoder model for complexity reduction. Tensorflow implementation of a convolutional autoencoder which learns from labels with an SVM loss.
- 2017 Cometa, The comprehensive multi-label data archive.

Docker container that deploys an automatized web repository to prepare and host multi-label datasets.

2016 Ruta, Software for unsupervised deep architectures.

R package for training unsupervised Deep Learning models.