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

2018–2022 **Doctoral researcher**, University of Granada, Spain.
Lecturer training contract under government-funded program ref. FPU17/04069, defending thesis soon.
- Main topic: *Finding alternative representations for data through deep learning techniques*
- Authored 11 JCR journal articles (8 in Q1) and 7 software packages
- Collaboration: **Repsol**, optimization of refinery processes (machine learning and autoencoders)
- Collaboration: **ArcelorMittal**, semantic segmentation of metallographic microstructures ⧉
- Directed bachelor's thesis: Automatic melody synthesis with Google Magenta
- 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-funded 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.