David Charte

Data scientist

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Skills

Data scientist with expertise in unsupervised and supervised deep learning, computer vision, 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 · React

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.
- Main topic: *Finding alternative representations for data through deep learning techniques*
- Authored 11 JCR journal articles (8 in Q1) and 7 software packages
- Collaboration: **Hospital Univ. de Granada**, detection of COVID-19 in X-ray images (deep learning)
- 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 models, extraction of multi-view models for supervised learning

Education

2022 **PhD in Computer Science**, University of Granada, Spain: *cum laude*
Focus on data science and machine learning

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.