

# David Charte

Computer scientist and mathematician

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## Education

- M.Sc. in Data Science and Computer Engineering**, Universidad de Granada, Granada.  
Emphasis in data science
- B.Sc. in Computer Science**, Universidad de Granada, Granada, 9.40/10.
- B.Sc. in Mathematics**, Universidad de Granada, Granada, 9.04/10.
- International Summer School on Deep Learning**, Universidad de Deusto and Rovira i Virgili University.
- A practical approach to Data Science and Big Data**, UNIA.
- New Trends on Computer Engineering**, Centro Mediterráneo (UGR).
- Project for detection and stimulus of mathematical talent (ESTALMAT)**, Sociedad Andaluza de Educación Matemática Thales, Granada.

## Languages

Spanish	Native	
English	C1 level	Cambridge CAE grade A: C1 level with C2 abilities
French	B2 level	DELFB2 certificate

## Skills

### Development

<b>Languages</b>	Ruby, C++, R, Python, Java, C, Shell	<b>Web</b>	HTML, JavaScript, CSS, Responsive web design, Jekyll, Rails
<b>Tools</b>	Emacs, Git, GitHub	<b>Data Science</b>	MXNet, Keras

### Systems Administration

<b>Systems</b>	Linux (Arch, Ubuntu), UNIX	<b>Web</b>	NGINX, Apache
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### Utilities

<b>Documents</b>	LaTeX, LibreOffice	<b>Graphics</b>	Inkscape, Krita
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## Experience

- Researcher**, Universidad de Granada, supervisor: Francisco Herrera Triguero.  
Research contract in project *BigDaPTOOLS*. Task: Development of data preprocessing libraries in R language.
- Researcher**, Universidad de Granada.  
Research grant. Topic: *Interpretative analysis of unsupervised deep learning techniques and extraction of multi-view models for supervised learning*

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## Journal Publications

2018

David Charte, Francisco Charte, Salvador García, María J. del Jesus, and Francisco Herrera (2018). “A practical tutorial on autoencoders for nonlinear feature fusion: Taxonomy, models, software and guidelines”. In: *Information Fusion* 44, pp. 78–96.

2015

Francisco Charte and David Charte (2015). “Working with multilabel datasets in R: the mldr package”. In: *The R Journal* 7 (2), pp. 149–162.

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## Conference Publications

2016

Francisco Charte, David Charte, Antonio Rivera, María José del Jesus, and Francisco Herrera (2016). “R ultimate multilabel dataset repository”. In: *International Conference on Hybrid Artificial Intelligence Systems*. Springer, pp. 487–499.

2015

David Charte and Francisco Charte (2015). “mldr: Paquete R para Exploración de Datos Multietiqueta”. In: *Conferencia de la Asociación Española para la Inteligencia Artificial*. AEPIA, pp. 695–704.

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## Bachelor’s Thesis

Title *Reducción de la dimensionalidad en problemas de clasificación con Deep Learning*  
Supervisor Francisco Herrera Triguero  
Description Theoretical analysis of techniques based on deep neural networks that tackle the dimensionality reduction problem. Software for usage of these models and visualization generation.  
Grade 10/10 (Distinction)

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## Interests and communities

**Interests** Data science, free culture, (human and machine) languages, divulgation

2014

**LibreIM**, *Student community dedicated to Mathematics and Computer Science*, Co-founder.

2016  
2017

**Interferencias**, *Non-profit group interested in online rights and security*, Participant.

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## Projects

2016

**Ruta**, *Software for unsupervised deep architectures*.

Source code: <https://github.com/fdavidcl/ruta>

An R package for training unsupervised Deep Learning models.

2017

**Cometa**, *The comprehensive multi-label data archive*.

Source code: <https://github.com/fdavidcl/cometa>

An automatized web repository to prepare and host multi-label datasets.

2014

**mldr**, *R package for analyzing and manipulating multilabel datasets*.

Source code: <https://github.com/fcharte/mldr>

An R library for exploratory data analysis of multi-label datasets.

2014

**Veaml**, *A markup language for video editing*.

Source code: <https://github.com/fdavidcl/veaml>

A markup language and parser for video editing tasks, in C++.