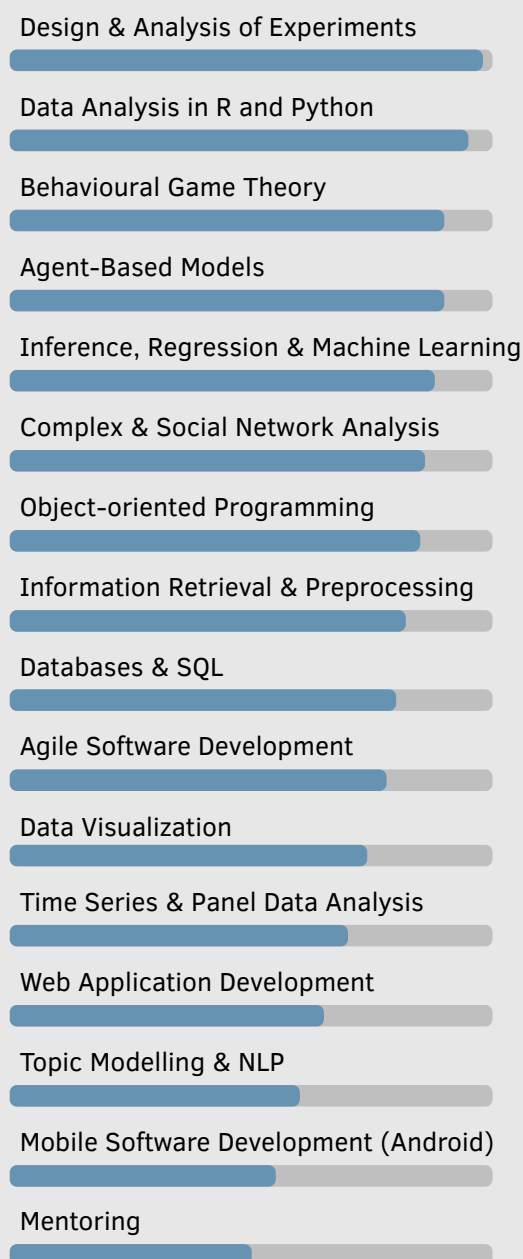# Felipe Maciel Cardoso

Data Scientist | Quantitative Researcher

👤 December 19, 1988

✉ Zaragoza, Spain

📞 +34 694 459 708

🌐 https://fmcardoso.github.io

@ fmacielcardoso@gmail.com

Skills

Design & Analysis of Experiments

Data Analysis in R and Python

Behavioural Game Theory

Agent-Based Models

Inference, Regression & Machine Learning

Complex & Social Network Analysis

Object-oriented Programming

Information Retrieval & Preprocessing

Databases & SQL

Agile Software Development

Data Visualization

Time Series & Panel Data Analysis

Web Application Development

Topic Modelling & NLP

Mobile Software Development (Android)

Mentoring

Languages

🇧🇷 Portuguese ● ● ● ● ●

🇬🇧 English ● ● ● ● ○

🇪🇸 Spanish ● ● ● ● ○

Education

2017 – 2020	**PhD in Physics**	University of Zaragoza
	Thesis: *Strategic and Selfless interactions: A study of human behaviour*	
2014 – 2016	**MSc in Computer Science**	University of Campinas
	Thesis: *Topical Homophily in an Online Social Network*	
2008 – 2012	**Bachelor of Computer Science**	University of Campinas
	Campinas, Brazil	

Working Experience

Research & Data Science

2017 – 2021	**Research assistant**	University of Zaragoza & UC3M
	Development of platforms for socio-economic experiments using Django/Python and PostgreSQL databases. Execution and data analysis of experiments using econometric models and machine learning algorithms. Theoretical modelling in evolutionary game theory.	

Software Development

2013 – 2014	**Software Engineer**	Kaffa Mobile
	Development of mobile and web applications with Java and Lua for GIS. SQL Server, HSQLDB and H2 databases. Requirements analysis directly with stakeholders.	
2012 – 2013	**Software Developer**	MC1
	Development of applications for Android and Windows mobile devices. Ported Windows Mobile (C#) code to Android (Java). SQL Server and SQLite databases. Training of interns.	
2011 – 2012	**Software Engineer**	Kaffa Mobile
	Development of applications with Java and Lua for mobile devices. SQL Server, HSQLDB and H2 databases.	
2011 – 2011	**Web Developer**	CPqD
	Web Development with Java and JavaScript.	
2009 – 2011	**Web Developer**	Institute of Economics - UNICAMP
	Development of Web Applications using Java, JavaScript, JSF, and SQL Server Database.	
2008 – 2008	**Web Developer**	Celere IT
	Development of Web Applications with C#.NET,ASP.NET, and SQL Server Database.	
2007 – 2007	**Software Developer**	John & Mark IT Solutions
	Software Development with Visual Basic.NET and SQL Server.	

Exchanges

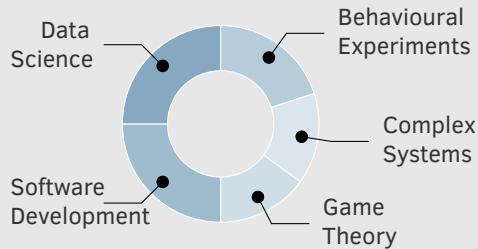|		
2019 – 2019	**Institute for Scientific Interchange**	Turin, Italy
	One month exchange at the ISI Foundation.	
2018 – 2018	**Institute for Scientific Interchange**	Turin, Italy
	One month exchange at the ISI Foundation	
2015 – 2016	**University of Zaragoza**	Zaragoza, Spain
	Six months exchange at the COSNET Lab.	

Grants & Awards

2015 – 2016	**Open Data Scholarship**	Microsoft Research
	17 Months Master Scholarship	
2015 – 2016	**International Mobility Scholarship**	Santander
	Mobility scholarship for 6 months exchange at University of Zaragoza	
2014 – 2016	**Master Scholarship**	CAPES
	3 Months Scholarship	

Felipe Maciel Cardoso

Data Scientist | Quantitative Researcher

Expertise

- Data Science
- Behavioural Experiments
- Complex Systems
- Game Theory
- Software Development

Programming Languanges

Python | R | C++ | Java | Lua | C
C# | JavaScript

Databases

PostgreSQL | MySQL | SQL Server
HSQLDB | SQLite

Development Methodologies

Scrum | Kanban

Libraries & Tools

caret | lme4 | plm | ggplot2
tidyverse | igraph | Shiny
knitr | NumPy | SciPy | Keras
Scikit-learn | Pandas | graph-tool
NLTK | Gensim

Referee Experience

PLoS ONE | Physical Review E
Chaos, Solutions & Fractals | JSTAT
Journal of Complex Networks

| 2011 | **1st Place on the Evaluation Competition** | IHC+CLIHC 2011 |
| | Undergraduate Level | |

Publications

2020 **Dynamics of heuristics selection for cooperative behaviour**
F. Maciel Cardoso, C. Gracia-Lázaro, and Y. Moreno
New Journal of Physics

2020 **Behavioural patterns behind the demise of the commons across different cultures**
M. Jusup, F. Maciel-Cardoso, C. Gracia-Lázaro, C. Liu, Z. Wang, and Y. Moreno
Royal Society Open Science

2020 **Effect of network topology and node centrality on trading**
F. Maciel Cardoso, C. Gracia-Lázaro, F. Moisan, S. Goyal, A. Sánchez, and Y. Moreno
Scientific Reports

2020 **Understanding drivers when investing for impact: an experimental study**
L. De Amicis, S. Binenti, F. Maciel Cardoso, C. Gracia-Lázaro, A. Sánchez, and Y. Moreno
Palgrave Communications

2020 **Time evolution of the behaviour of Brazilian legislative Representatives using a complex network approach**
L. Marenco, H.A. Carmona, F. Maciel Cardoso, J.S. Andrade Jr, and C.L. Cesar
PLoS ONE

2019 **Topical Alignment in Online Social Systems**
F. Maciel Cardoso, S. Meloni, A. Santanche, and Y. Moreno
Frontiers in Physics

Talks

2020 **6th Annual Workshop on Complex Sociotechnical Systems**
COMSOTEC20, Burgos, Spain
The selection of heuristics and the evolution of cooperation

2019 **Early Career Researcheers in Experimental Economics Workshop**
ECREEW, Santiago de Compostela, Spain
Indirect donations promote contributions to public goods

2019 **Conference on Complex Systems**
CCS19, NTU University, Singapore
Trading in Complex Networks

2019 **BIFI IX National Conference 2019**
BIFI 19, Zaragoza, Spain
Trading in Networks - Topology and Prices

2018 **Conference of Complex Systems**
CCS18, Thessaloniki, Greece
Universal behavioural patterns behind the demise of the commons

2018 **4th Annual Workshop on Complex Sociotechnical Systems**
COMSOTEC18, Zaragoza, Spain
Trading in Networks: Efficiency and Topology

Academic Activities

2015 **Teaching Assistant - IC/UNICAMP**
Algorithms and Computer Programming
Laboratory classes, marking, assignment review, office hours, online support.

2018 **BIFI18 Zaragoza, Spain**
BIFI International Conference on Complexity, Networks and Collective Behavior
Web design, implementation and local organization