# Felipe Maciel Cardoso

Data Scientist | Quantitative Researcher

December 19, 1988

Zaragoza, Spain

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#### 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** 





### **Education**

2017 – 2020 **PhD** in Physics University of Zaragoza

Thesis: Strategic and Selfless interactions: A study of human be-

haviour

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 - 2021Research 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

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** 

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

CPaD

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

Development of Web Applications with C#.NET, ASP.NET, and SQL

Server Database.

**Software Developer** 

John & Mark IT Solutions

Microsoft Research

**CAPES** 

Software Development with Visual Basic.NET and SQL Server.

**Exchanges** 

2019 **Institute for Scientific Interchange** Turin, Italy

One month exchange at the ISI Foundation.

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**

2014 – 2016 Master Scholarship

2015 – 2016 Open Data Scholarship

17 Months Master Scholarship

2015 - 2016 **International Mobility Scholarship** Santander

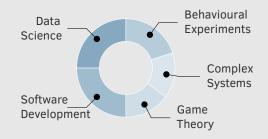
Mobility scholarship for 6 months exchange at University of Zaragoza

3 Months Scholarship

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## Expertise



# Programming Languanges -

Python R C++ Java Lua C
C# JavaScript

#### Databases

PostgreSQL MySQL SQL Server
HSQLDB SQLite

# Development Methodologies

Scrum Kanban

## Libraries & Tools -



## Referee Experience

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

#### 2011 1st Place on the Evaluation Competition

Undergraduate Level

#### **Publications**

2020	Dynamics of heuristics selection for cooperative behaviour
	F Marial Candona C Currie Lámora and V Mariana

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

IHC+CLIHC 2011

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 experimen-

tal 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 Represen-

tatives 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 Worksho	on Complex Sociotechnical Sy	/stems

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 Collec-

tive Behavior

Web design, implementation and local organization