

Samantha Ajovalasit

Personal Information

Date of Birth *September 2 1987*

City of Birth *Palermo*

Nationality *Italian*

Experience

03/2023 **Postdoctoral Research Fellow RTD-A, *Università degli Studi di Palermo***

GRINS -Growing Resilient, Inclusive and Sustainable Grins produces frontier research in the economic-political-social science and data science spectrum to provide scientific evidence to guide public policy as well as the choices of citizens and companies in complex decision-making contexts.

05/2022 - **Postdoctoral Research Fellow, *Università degli Studi di Palermo***

03/2023 *Just Smart Project - Tools and Models for Judges' work optimization* This project aims to improve the work of judges and court law with a rigorous statistical analysis of historical court data, with a particular focus also on text analysis tool.

04/2021- **Postdoctoral Research Fellow, *Ca' Foscari University, Venezia***

04/2022 *H2020 Grant no. 101004488 Project European Media Platform - EUMEPLAT - Assessing positive and negative externalities for European Culture.* I analyzed the consumption and production of all media markets in Europe in the last thirty years, to find common patterns among the European Countries. I also investigated how to find new ways to anticipate the fake news spread of *anti-European* sentiment.

09/2021 - **Contract Professor of Advanced Application of Computer Science for Cultural**

01/2022 **Heritage, *Ca' Foscari University, Venice***

I supplied extra classes of basics of R and network analysis with interactive training.

10/2018 - **Senior Tutor of Statistics, *University of Catania***

02/2019 – In this tutoring period I taught the student of Statistical Economics with a review of the statistical theory and exercises.

10/2019 -

04/2020

10/2018 - **Senior Tutor of Data Science and Demography, *University of Catania***

02/2019 – I taught the students of the Demography class the basics of data science, the Twitter API to do sentiment and classification analysis with R.I taught the students of the Demography class the basics of data science, the Twitter API to do sentiment and classification analysis with R.

10/2019 -

02/2020

08/2017 - **Internship, *RJC Soft s.r.l., Pisa***

12/2017 *Project Sprint.* I worked with the *R&D* team, where I analyzed - by means of Python and QGIS - the urban traffic system in the municipality of Pisa.

Presentation, Proceedings, and Papers

Paper - *ESG factors and sovereign debt.* *Economia Italiana* 46(3), 145-164 Published April,2025 10.57621/EI2024-03-I-06.

Paper - *Debt Sustainability in the Context of Population Ageing: A Risk Management Approach.* *Risks* 12(12) - Published: November 26, 2024 10.3390/risks12120188

Paper - *Evidence of disorientation towards immunization on online social media after contrasting political communication on vaccines. Results from an analysis of Twitter data in Italy.* PlosOne - Published: July 9, 2021 - <https://doi.org/10.1371/journal.pone.0253569>

Presentation - University of Pisa - *Are Bad Governments a Threat to Sovereign Defaults? The Effects of Political Risk on Debt Sustainability*, November, 5 2024.

Presentation - AMASES (Italian Association for Mathematics Applied to Social and Economic Sciences) - XLVIII Annual Conference 2022 - *Political risk and sovereign debt sustainability*, 5 - 7 September 2024, Ischia.

Presentation - SIDE (Italian Society of Law and Economics) Lumsa University - 18th Annual Conference 2022 - *The Impact of Ratification of Human Rights Treaties on Economic Inequality*, 15-16 December 2022, Palermo.

Presentation - EASP European Population Conference - 2020 *Evidence of distrust and disorientation towards immunization on online social media after contrasting political communication on vaccines. Results from an analysis of Twitter data in Italy. Health and Wellbeing in a Digital World session.* June 22-27, 2020. Canceled due to COVID-19 Pandemic.

Presentation - PAA (Population Association of America) 2020 - Flash Session. *Are the last eighteen months of contrasting vaccine policy in Italy creating distrust and disorientation amongst the public? Results from sentiment analysis of Twitter data.* April 22-25, 2020 Washington D.C. (USA). Canceled due to COVID-19 Pandemic.

Presentation - Data Science & Social Research - 2019 Bicocca University, Milano. Working Paper in *Investigating Vaccine Sentiment In Italy Over A Period Of Ambiguous Immunization Policy*. February 4-5, 2019.

Presentation - POPDAYS - Giornate di studio sulla Popolazione 2019. Bocconi University - Milano: Working paper in *An Analysis of Twitter Vaccine Sentiment in Response to Ambiguity in the Latest Vaccine Policies in Italy*. 24-26 January 2019

Member of Scientific Committee - The international Conference on Frontiers in Stochastic Modelling for Finance - University of Palermo - This conference aims to enhance existing connections and foster new collaboration between researchers in the fields of modeling for finance, stochastic control, and quantitative finance. 25-27 October 2023

Member of Organizing Committee - XXVI Quantitative Finance Workshop - University of Palermo - The workshop aims to bring together academia and industry to stimulate discussions and interactions between researchers and professionals on the theoretical and applied aspects of Quantitative Finance broadly understood. 15-17 April 2025

Report Eumeplat Project - *Data clustering reports - Lessons from Media History* available [here](#) and the dashboard available at <https://eumeplat.shinyapps.io/EumeplatDashboard/>

Teaching activity

- 10/2023 - **Teacher in Mathematics for Business, University of Palermo, Palermo**
Tenure track of the course of Mathematics for Business. This course covers fundamental and advanced mathematical concepts for business, including calculus, algebra, and financial mathematics, focusing on practical applications in economic and financial contexts.
- 05/2022 - **Teaching assistant in Political Economy, University of Palermo, Palermo**
03/2023 As a teaching assistant for the degree in Law I did supplementary teaching activities and I took part in the exam commissions.

- 10/2018 - **Senior Tutor of Statistics, University of Catania**
- 02/2019 - In this tutoring period, I taught the student of Statistical Economics with a review of the statistical theory and exercises.
- 10/2019 -
- 04/2020
- 10/2018 - **Senior Tutor of Data Science and Demography, University of Catania**
- 02/2019 - I taught the students of Demography class basics of Data Science, using the twitter-API in order to apply sentiment and classification analysis with R.
- 10/2019 -
- 02/2020

Education and Training

- 2017 - 2020 **PhD Economics, Management and Statistics, University of Messina & University of Catania**
 Title of thesis: *"Disorientation towards routine immunization, COVID-19 anxiety, and propensity to vaccinate. An analysis based on Twitter data in Italy"*
 Supervisors *Prof. Angelo Mazza, Prof. Piero Manfredi*
 The work aims to combine a number of interdisciplinary points of view (computational science and Big data analysis, epidemiology, human behavior, and decision science). The final work, developed by machine learning and classification algorithms, is a sentiment analysis of opinions in relation to immunization decisions in 2018 among the Italian population on Twitter. The thesis demonstrates the disorientation among the population, suggesting that health policies should not be used to raise political consensus. I also analyzed the similarities between the ongoing COVID-19 pandemic and the propensity to anxiety on Twitter in the same period. Thesis defended on Dec 21, 2020
- 2017 **II level University Master Degree in Big Data Analytics & Social Mining, University of Pisa**
 Title of thesis: *"Urban Traffic Analysis via GPS Trajectories"*
 The master's is aimed at training "data scientists", professionals with a mix of multidisciplinary skills to manage big data and extract knowledge from it to support decision-making and innovative services. Data scientists also manage the ethical and legal implications of data science. The course involves different disciplines: data mining and machine learning, data analysis and visualization, network science, computational social science, ethics, and data journalism.
- 2013 - 2016 **Master's Degree in Economics, University of Pisa & Sant'Anna School of Advanced Studies - Pisa, 110/110**
 Title of thesis: *"Option Pricing with Monte Carlo Simulation and Variance Reduction Technique"*
 Supervisor *Prof. Riccardo Cambini*
 The program provides its students with advanced training in economics supported by complementary quantitative and statistical tools. The central aim of the program is to enhance the students' ability to analyze economic phenomena at different levels: firm, industry, national, and international. It provides the knowledge of maths-statistical-econometric tools, both theoretically and with the advanced knowledge of software tools such as Gretl, R, and Matlab.
- 2006 - 2012 **Bachelor's Degree in Economics and Finance, University of Palermo, Palermo**
 Title of thesis: *"Cessione dei Crediti e Cartolarizzazione"*
 An economic perspective on the Securitization, with a focus on the Sub-Prime Crisis.
 Supervisor: *Prof. Fabrizio Piraino*
 The program provides the study of the economic system with a particular interest in financial markets. The aim is to enhance the student's ability to have a research method focused on the solution of financial problems, research, and the elaboration of data analysis.

Other training activities

- 06/2022 **Summer School in Network Econometrics**, *Italian Society of Econometrics - Ca' Foscari University of Venezia*
The aim of the course is to provide the fundamentals of the econometrics network with particular reference to the Network mapping and visualisation, the Network Extraction Methods, Multi-layer Network Models, and their applications to finance.
- 12/2019 **Fundamental of Digital and Computational Demography**, *Max Planck Institute for Demographic Research, Rostock*
The course provides tools to improve demographic analysis in demography and social science methods, as well as to interpret new kinds of data, focusing in particular on big data.
- 07/2019 **Summer School in Data Science and Epidemic Models**, *University of Trento*
This international summer school aims to present state-of-the-art techniques to improve our understanding of epidemic dynamics and spread by means of innovative computational and statistical methods to extract information also from social media and complex network data.
- 05/2018 **Summer School on Clustering, Data Analysis and Visualization of Complex Data**, *University of Catania*
The course is intended to achieve postgraduate training in special areas of statistics for both researchers and professional data analysts. The focus is on classification and clustering methods, with attention to visualization techniques and modern high-dimensional data sets (MHDS).

Other Academic activity

Organizing Committee - XXII Quantitative Finance Workshop - University of Palermo - The workshop aims to bring together academia and industry to stimulate discussions and interactions between researchers and professionals on the theoretical and applied aspects of Quantitative Finance broadly understood 17-21 April 2025

Language skills

Italian Mother tongue
English B2
French B1

Computer skills and competences

Elaboration of data: Advanced User
Security: Independent User
Communication: Advanced User
Problem Solving: Advanced User
Creating Content: Advanced User
High knowledge of the main operative systems Microsoft Windows, macOS, Linux (Arch - Ubuntu).
High knowledge of the statistical software - open source - R
High knowledge of programming language - Python
High knowledge of the "L^AT_EX" package
Advanced knowledge of Microsoft Office packages and Libre Office
Advanced knowledge of desktop geographic information system - QGIS
Advanced knowledge of the statistical software - Stata
Good knowledge of Relational Database Management System - MySQL
Good knowledge of programming software - MATLAB

Good knowledge of the computational software - Knime

Social skills and competences

Good communication skills and organizational skills practiced during the activity of Contract Professor and as Senior Tutor

Driving Licence: Italy B (cars), own car.