Niccolò SALVINI

Sr. Data Scientist | PhD student in Big Data for Healthcare Systems

🎓 EDUCATION

2021 - 2025	**Doctor of Philosophy (PhD) in Big Data for Healthcare System and Research, CATHOLIC UNIVERSITY OF SACRED HEARTS, CAMPUS ROME (MEDICINE DEPARTEMENT), Rome (IT)** – Statistical modelling – Machine learning – Spatial statistics – Empirical health research Python R SQL
2018 - 2020	**Master of science in Statistical and Actuarial Sciences | Data analytics for business and economics, CATHOLIC UNIVERSITY OF SACRED HEART, Milano (IT)** > 106/110 > Thesis : REST Scraping API for Real Estate data, a Spatial Bayesian modeling perspective with INLA. > Thesis advisor : Prof. Marco della Vedova (Computer Science) – Statistical and Geospatial modelling – MLOps and foss data pipelines – health econometrics – Deep Learning and Neural Networks Python R SQL Cloud GCP AWS
2014 - 2017	**Bachelor in Business Economics | Economia e Commercio, UNIVERSITY OF FLORENCE, Firenze (IT)** > Thesis : IT Products' Price spreads in major online retailers and margins of Arbitrage and Speculation" > Thesis advisor : Prof. Giampiero Maria Gallo (Econometrics) – Statistical modelling – Micro/macroeconomics – Corporate finance R SQL GRETL

🎓 TEACHING

2022-2025	**Teaching Assistant, CATHOLIC UNIVERSITY OF SACRED HEART, Rome (IT)** > Course : Statistics and Big Data > Degree : management of healthcare systems (Magistrale) R
2022	**Teaching Assistant, CATHOLIC UNIVERSITY OF SACRED HEART, Rome (IT)** > Course : Health Econometrics > Degree : management dei servizi (Magistrale) R
2021	**Teaching Assistant, SPATIAL ECONOMETRICS ASSOCIATION (SEA), Rome (IT)** > Course : Reproducibility in spatial research (GIT + GitHub) > Spatial Econometrics Advanced Institute (SEAI) GIT

💼 EXPERIENCE

In progress 2024	**Sr. Data Scientist, INTUO SRL, Remote** Freelancing for various SMEs, developing solutions for OCR, data warehouse and business intelligence. Python R Docker ETL pipelines Superset Web Scraping

2024
2024
	Statistician, AZIENDA OSPEDALIERO-UNIVERSITARIA CAREGGI, Remote
	Contributing to the NIMBLE project :
	   ❯ Database management.
	   ❯ Stroke classification based on medical image data.
	Python Database Management Medical Data Analysis

In progress 2024	**Data Scientist, DIPS, UNIVERSITÀ DELLA TUSCIA (UNITUS), Remote** Research grant (PRIN) on "Digital Innovation in Price Statistics : Open and Fast Insights from Online Scraped Data." Python Docker Selenium Metabase MongoDB
2021–2023 2023	**Data Scientist, CORE, UNIVERSITÀ DI PERUGIA (UNIPG), Remote** Research grant for "CO.R.E. - Corruption Risk Indicators in Emergency" funded by the EU. Focused on analysis of corruption risk in public procurement during emergencies. Delivered dashboards and open data tools for ANAC's procurement data. Python R Docker AWS Dashboard Development

In progress
2020
	Freelance Data Scientist and Engineer, , Remote
	Delivered :
	   ❯ ETL/ELT pipelines and database management systems.
	   ❯ ML models and MLOps setups.
	   ❯ Web scraping for unconventional data sources.
	   ❯ Automated reports and custom web apps.
	   ❯ Advanced interactive visualizations.
	Python R Docker AWS Shiny Streamlit Airbyte

2021–2022 2022	**Data Scientist, ENCO, Remote** Time series forecasting for energy optimization in ENergy COmmunities using Prophet and SARIMA models. Python Ray Django

2021–2024
2024
	Data Scientist, BINOOCLE, Remote
	   ❯ LLM chatbots for mental health in workplaces.
	   ❯ Computer vision with NVIDIA Smartcow cams, AWS IoT core, and analytics via Quicksight.
	Python LLM GStreamer NVIDIA cuDNN Deepstream AWS

📖 PUBLICATIONS

> S.D. Sarto, M. Gnaldi and N. Salvini, Sustainability and high-level corruption in healthcare procurement : Profiles of Italian contracting authorities. Socio-Economic Planning Sciences (2024), doi : https://doi.org/10.1016/j.seps.2024.101988.

> AA.VV. 2nd Italian Conference on Economic Statistics (ICES 2024), Statistical Analysis of Complex Economic Data : Recent Developments and Applications, Book of Short Papers. Casa Editrice Bonechi, 5 July 2024.

> Del Sarto S, Salvini N, Gnaldi M (2024). Dimensions of corruption risks and profiles of winning companies over emergency periods. In Fabrizi E, Giambona FA, Marini C, Marletta A, Rocca A (eds.) : Book of Short Papers - 2nd Italian Conference on Economic Statistics (pp. 88-91). Bonechi, Firenze. ISBN 9788847629509

📖 PREPRINT ARTICLES

> Niccolò Salvini, Simone del Sarto, Michela Gnaldi. (2023). coresoi : measuring corruption risk in emergency. Zenodo. `https://doi.org/10.5281/zenodo.8013258`

> Niccolò Salvini. (2023). ucscthemes, easily templating with style for Università Cattolica del Sacro Cuore (v1.0). Zenodo. `https://doi.org/10.5281/zenodo.8011290`

> Niccolò Salvini. (2023). 'cattolicadown' RMarkdown to LaTeX thesis template for UCSC (1.0). Zenodo. `https://doi.org/10.5281/zenodo.7995487`

> G. Arbia, V. Nardelli, N. Salvini, & I. Valentini. (2024). New accessibility measures based on unconventional big data sources. `https://doi.org/10.48550/arXiv.2401.13370`

> Giuseppe Arbia, & Niccolò Salvini. (2024). Feasible pairwise pseudo-likelihood inference on spatial regressions in irregular lattice grids : the KD-T PL algorithm. `https://doi.org/10.48550/arXiv.2401.05905`

> Federico Crescenzi, Niccolò Salvini, Tiziana Laureti, & Luigi Palumbo. (2024). Assessing Food Price Dynamics in Italy : A Spatial-Temporal Analysis Using Web-Scraped Data.

> Ilaria Benedetti, Federico Crescenzi, Niccolò Salvini & Tiziana Laureti. (2024). Business Digitalization in Italy : A Comprehensive Analysis Using Supplementary Fuzzy Set Approach.

> Vincenzo Nardelli, Niccolò Salvini & Giuseppe Arbia. (2024). Visualising the Aggregation Bias in the Estimation of Spatial Cor-

relation with H3 Indexing of Big Data Sets.

🎤 CONFERENCE AND SPEECH

> SEA21 Spatial Econometrics Association conference, Tokyo (JP), remote 2021
> SEA22 Spatial Econometrics Association conference, Warsaw (PL), remote 2022
> SIS19 "Smart Statistics for Smart Applications" - Annual conference of the Italian Statistical Society, Milano (IT) 2019
> ITACOSM22 "Survey Methods for Statistical Data Integration and New Data Sources" - Perugia (IT) 2022
> VERA22 "Spatial Health Econometrics Workshop" - Venice (IT) July 2022
> StatisticalI22 "Measuring the risk of corruption : modern data integration on Italian public procurement data as an instrumental step to develop a composite indicator for corruption risk" - (IT) oct-2022
> "Misure e indicatori di rischio di corruzione in Italia, tra vincoli di privacy, (in)disponibilità di dati ed esigenze di interoperabilità" - SIS X Guardia di Finanza 2022, Online Nov-2022
> SDSC23 "Spatial Data Science Conference 2023" - CARTO, London (EN) May the 17th-18th, 2023
> SIS23 "Statistical Learning, Sustainability and Impact Evaluation" - Annual conference of the Italian Statistical Society, Ancona (IT) June 21st - 23rd 2023
> R/Medicine 2023 - Virtual Conference June 5th - 9th 2023
> ASA23, "Statistics, Technology and Data Science for Economic and Social Development" - Bologna (IT) 6th - 8th Sept
> CLADAG23, "Classification and Data Analysis Group", 14-th Scientific Meeting, Invited session - Salerno (IT) Sept 11th - 13th
> IECES24, 2nd ITALIAN CONFERENCE ON ECONOMIC STATISTICS, Contributed session - Firenze (IT) Feb 7th - 8th
> SIS24 Annual conference of the Italian Statistical Society, Solicited session - Bari (IT) June 17th - 20th, 2024
> SEA24 Spatial Econometrics Association conference, Groningen (NL) June 23rd - 25th, 2024.
> ICES 2025 SUSTAINABILITY, INNOVATION AND DIGITALIZATION : Statistical Measurement for Economic Analysis, Invited session - Napoli (IT) February 14th- 15th, 2025
> SEA 2025 Spatial Econometrics Association conference, Organising committee and contributed session - Rabat (MA), May 2nd - 5th, 2025
> IES 2025 Statistical Methods for Evaluation and Quality, contributed session - Bressanone (iT), June 25th - 27th, 2025

📘 ADVANCED COURSES AND SEMINARS

> Rafforzamento dell'infrastruttura tecnologica e degli strumenti per la raccolta, l'elaborazione, l'analisi dei dati e la simulazione Dr.ssa Serena Battilomo, Prof. Giuseppe Arbia
> (CdP) Innovazione digitale e sistemi informativi per il governo delle organizzazioni sanitarie.

✳ LICENSE AND CERTIFICATIONS

> GMAT Graduate Management Admission Council™ (GMAC™) Release date : gen 2018 · No expiration date 580
> IELTS (International English Language Testing System= - overall 7.0 Release date : feb 2018 · expiration date : feb 2020 7.0
> DELF (Diplôme d'études en langue française Release date : apr 2015 · no expiration date 99

</> HACKATONS AND COMPETITIONS

> SUS19, Stats Under the Stars 2019 -Bocconi, Velodromo 18th out of 50+ DS teams (PhDs and researchers)
> SUS23, Stats Under the Stars 2023 -Università Politecnica delle Marche, Ancona 3rd out of 40+ DS DS teams (PhDs and researchers) Awarded 500€

🖥 TECHNICAL SKILLS

Coding	Python, R, SQL, HTML, CSS, bash, Javascript
Skills	Web scraping, Machine Learning, data quality, data cleaning
Data Science toolkits	Tidyverse, Polar, Pandas, Shiny, Streamlit/Gradio, Tidymodels, SciKit-learn, Metaflow, Tensorflow, Pytorch, Fastapi
Database	PostgreSQL, PostGIS, MongoDB, DuckDB
Cloud	Amazon Web Services (AWS), Google Cloud Platform (CGP), DigitalOcean, Hetzner, fly.io
Container	Docker, Compose, Swarm, Kubernetes (beginner)
Web development	WordPress
Others	Git, GitHub

👥 COMMUNITY AND VOLUNTEER EXPERIENCE

BOARD MEMBER | DATA NETWORK   2019

Data Network is a no-profit association that wants to bring in a unique environment students, professionals and companies that believe in the power of data and the change that could bring to modern society.

☑ website

CONTRIBUTOR | OFFICINE ITALIA   2020

Built together with other international colleagues a set of text mining tools (3 minimal web apps) analysing recovery fund plans. The objective was to measure the inclusion (via NLP) "youth" themes across EU countries.

☑ website

66 RÉFÉRENCES

Prof. Giuseppe Arbia, PhD	Prof. Michela Gnaldi	Prof. Tiziana Laureti
Full time professor of statistics, UCSC	*Contract professor*, UNIPG	*Full time professor*, UNITUS
@ giuseppearbia13@gmail.com	@ michela.gnaldi@unipg.it	@ laureti@unitus.it
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❷ LANGUAGES

Italian ● ● ● ● ●
English ● ● ● ● ○
French ● ● ● ○ ○

17 Mar 2022