



# Leonardo Sanna

Linguist & NLP specialist

Bologna  
Age - 29

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## Skills

- Data Analysis (R & Python)
- Social Media Analysis
- Corpus Linguistics
- Pragmatics
- Word Embedding

## Languages

Italian - Native Speaker  
English - Professional (C1)  
French - Advanced (B2)  
German - Intermediate (B1)

## References

1. Prof.ssa Marina Bondi  
[marina.bondi@unimore.it](mailto:marina.bondi@unimore.it)
2. Prof. Dario Compagno  
[dario.compagno@parisnanterre.fr](mailto:dario.compagno@parisnanterre.fr)

## Profile

Dedicated researcher proficient in linguistics, semiotics, and natural language processing (NLP). Leveraging my background in humanities, I have acquired a comprehensive understanding of language structures and communication theories, alongside a robust grounding in NLP methodologies and techniques. Throughout my doctoral studies, I focused on developing a methodology for investigating algorithmic personalization on social media platforms.

Furthermore, my professional trajectory as a Communication Officer and Marketing Data Analyst has endowed me with valuable skills in copywriting, social media strategy, and marketing campaigns. This extensive experience as a communication consultant has enhanced my ability to communicate effectively, especially when conveying complex research findings to diverse audiences.

## Employment History

### Postdoc Research Fellow // Università di Udine

APRIL 2023 – PRESENT

Research and development of analysis methodologies with **NLP techniques**, on different humanities disciplines (latin, greek, Italian literature)

- Topic Modelling
- Sentiment Analysis
- Web Scraping

### Data Analyst // Radio Raheem

MARCH 2022 – APRIL 2023

I followed Radio Raheem in setting up **Google Data Studio dashboards** and in choosing a new analytics portal for radio streaming. I prepared data collection on the new website, including event configuration, together with the web developer team.

- Google Analytics 4
- Social Media Analysis
- Customer Insights

### Linguist // Future Education Modena

FEBRUARY 2022 – DECEMBER 2022

I was the point of contact between the team of linguists and the team of developers as part of creating the **LINDA** platform. My main task was to find the best **NLP technologies** for the platform's educational projects.

- Research & Development NLP area
- Lecturer (Media Education)

### Data Analyst // Will Media

JUNE 2021 – DECEMBER 2021

For Will Media, I was responsible for creating and maintaining the **insights dashboards**. I also created a **sentiment analysis framework** for comment analysis.

## International Experience

2019 – 2021

Universiteit van Amsterdam

Visiting Fellow at the Digital Methods Initiative (DMI). Involved in multiple projects of social media analysis

• [Algorithm Exposed: Or, how to keep your bot alive](#) (2019)

• [Facebook Anatomy](#) (2019)

• [Dark Telegram](#) (2019)

• [Haters gonna hate: Dissecting hate speech on social media](#) (team leader, 2020)

• [Investigating echo chambers, filter bubbles and polarization on YouTube](#) (team leader, 2021)

2020 – 2021

Université Sorbonne Nouvelle Paris 3

Visiting Fellow at *Lab IRMÉCCEN - Institut de Recherche Médias, Cultures, Communication et Numérique*. Research on YouTube filter bubble.

2020

Université de Lorraine, Metz

Visiting Fellow at *CREM - Centre de recherche sur les médiations*. Working on text mining with R & Python

- Sentiment Analysis (Italian BERT Sentiment model)
- Social Media Analysis

## Communication Officer // Namex - Roma IXP

FEBRUARY 2018 – PRESENT

My primary responsibility is crafting compelling and engaging **written communication**. This includes producing a wide range of content, such as press releases, articles, and marketing materials. I am also responsible for designing and analyzing **marketing campaigns** via email and CRM, including marketing surveys.

- Copywriting & social media strategy
- Press Releases & Media Monitoring
- Project Management (Visual Communication, Events)

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## Education

### Ph.D. // Digital Humanities & Digital Communication // Università di Modena e Reggio Emilia

NOVEMBER 2018 – NOVEMBER 2022

I have conducted extensive research on the impact of algorithmic personalization on the online discourse, analyzing how personalized content and recommendations can shape users' perspectives.

Research interests:

- Social Media Analysis
- Natural Language Processing
- Distributional Semantics

**Thesis:** Social Media Analysis using word embedding: Exploring echo chambers and filter bubbles. [Full text](#)

### Master // Semiotics // Università di Bologna

SEPTEMBER 2015 – NOVEMBER 2017

During my Master in Semiotics, I acquired solid theoretical and methodological skills for textual and communication campaign analysis. I have also developed a solid foundation in computational linguistics that has enabled me to write a thesis on post-truth, focusing on the semantic analysis of fake news.

Skills:

- Semantic analysis with machine learning (word and document embedding)
- Web interface analysis
- Philosophy of Language

### Bachelor // Communication Science // Università di Bologna

SEPTEMBER 2012 – JULY 2015

During my bachelor's degree I acquired interdisciplinary skills in the communication sciences, ranging from sociology to psychology, with a strong focus on semiotics. In particular, I focused on analyzing journalistic

texts, which was also the subject of my final dissertation.

**Skills:**

- Journalism
  - Digital Media Analysis
  - Web Design
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## **Publications**

**The COVID-19 infodemic on Twitter: Dialogic contraction within the echo chambers.** Bondi Marina, Sanna Leonardo (2023). In Routledge Handbook of Discourse and Disinformation (*accepted/in press*)

**Exploring the echo chamber concept: a linguistic perspective.** Bondi Marina, Sanna Leonardo (2022) In *Conspiracy Theory Discourses*, pp. 143-168. Benjamins, 2022. [Full text](#)

**The Origins of the Alleged Correlation between Vaccines and Autism. A Semiotic Approach.** Cosenza, Giovanna; Sanna, Leonardo. - In: SOCIAL EPISTEMOLOGY. - ISSN 1464-5297. - (2021), pp. 1-14. [Full text](#)

**YTTREX: crowdsourced analysis of YouTube's recommender system during COVID-19 pandemic.** Sanna Leonardo., Romano Salvatore., Corona Giulia, Agosti Claudio. (2021). In: Lossio-Ventura J.A., Valverde-Rebaza J.C., Díaz E., Alatrística-Salas H. (eds) Information Management and Big Data. SIMBig 2020. Communications in Computer and Information Science, vol 1410. Springer, Cham. [Full text](#)

**Implementing Eco's Model Reader with Word Embeddings. An Experiment on Facebook Ideological Bots** Sanna, Leonardo; Compagno, Dario. (2020). In Proceedings of JADT 2020 : 15th International Conference on Statistical Analysis of Textual Data, Toulouse, 16-19 Jun 2020. [Full text](#)

**Data-driven Semiotics and Semiotics-driven Machine Learning** Sanna, Leonardo. - In: LEXIA. - ISSN 1720-5298. - 33-34 (2020), pp. 89-107. [Full text](#)