Leonardo Fernandes Nascimento

Computational Social Scientist | Data Science, AI, and Digital Methods
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Summary

Computational social scientist and Associate Professor at the Federal University of Bahia, with experience in applied research, data science, and public-sector project management. Research combines NLP, network analysis, RAG, web scraping, and mixed methods to study disinformation, information integrity, public policy, and digital ecosystems. Current roles include Data Analyst at CADE, Research Director at LABHD-UFBA, and CNPq Research Productivity Fellow (PQ-2).

Experience

Data Analyst — Administrative Council for Economic Defense (CADE) (Brazil) 2024 – Present

- Conduct data analyses and develop computational solutions for competition policy and antitrust intelligence.
- Built Digital Brain CADE, a pipeline that converts technical reports into a knowledge graph for the analysis of companies, cases, markets, and methodologies.
- Combine document extraction, entity normalization, knowledge graphs, and LLM-based enrichment in auditable workflows.

Associate Professor | Research Director — Federal University of Bahia (UFBA) / LABHD-UFBA (Salvador, Brazil) 2016 – Present

- Teach, conduct research, and supervise students in digital sociology, computational social science, and digital methods.
- Coordinate the Digital Humanities Lab at UFBA (since 2018) and lead interdisciplinary teams in applied research projects.
- Lead CNPq- and InternetLab-funded projects on disinformation, information integrity, digital democracy, and platforms.

Visiting Professor — University of Alberta (Edmonton, Canada) 2026

- Conducted research and international collaboration in computational social science, digital methods, and platform ecosystem analysis.

General Manager, Data Science — Government of Pernambuco (Recife, Brazil) 2023 – 2024

- Led data science initiatives for state public administration and evidence-informed decision-making.

Postdoctoral Researcher — University of Alberta (Edmonton, Canada) 2022 – 2023

- Conducted research on Telegram ecosystems in collaboration with AI for Society, combining data infrastructure, AI, and mixed methods.

Postdoctoral Fellow (PNPD/CAPES) — Federal University of Bahia (UFBA) (Salvador, Brazil) 2014 – 2016

- Conducted postdoctoral research at UFBA with a PNPD/CAPES fellowship.

Research Consultant — Joaquim Nabuco Foundation (Brazil) 2013 – 2014

Research Consultant — Fiocruz (Brazil) 2013

Selected Projects

Social-RAG: A retrieval-augmented generation framework for hermeneutic analysis and factual question answering over textual corpora produced on digital platforms.

- Combines evidence traceability, multi-judge evaluation, responsible data governance, and reproducible research artifacts; published in the PROPOR 2026 proceedings.

Cross-platform ecosystems and health information integrity: CNPq-funded research on the circulation of health misinformation and its effects on public policy, using network analysis, text mining, machine learning, and multimodal analysis.

Selected Projects (Continued)

Digital Democracy / Telegram: Research program on disinformation ecosystems, hate speech, and political extremism on Telegram, combining computational analysis with socio-anthropological research.

Skills

Programming and data: R, Python, SQL, pandas, tidyverse, web scraping
NLP and AI: topic modeling, sentiment analysis, embeddings, NER, RAG, AI agents
Networks and infrastructure: igraph, networkx, Elasticsearch, Kibana, Docker, Git/GitHub, GitHub Actions
Methods and visualization: mixed methods, ATLAS.ti, NVivo, Gephi, Flourish, Quarto

Education

PhD in Sociology — State University of Rio de Janeiro (UERJ) 2009 – 2013
Visiting Doctoral Fellowship in Sociology (CAPES) — École des Hautes Études en Sciences Sociales (EHESS), Paris 2010 – 2011
Master's in Sociology — University of São Paulo (USP) 2005 – 2007
Bachelor's in Psychology — Federal University of Bahia (UFBA) 1998 – 2003

Selected Publications

- Nascimento, L. F. et al. (2026). Social-RAG: A retrieval-augmented generation pipeline for computational social science research on Telegram. PROPOR 2026 / ACL.
- Nascimento, L. F., Cesarino, L., & Fonseca, P. (2026). Democracy "inside out": On far-right refracted publics in Brazil. The Routledge Companion to Digital Media and Democracy.
- Nascimento, L. F. (2020). Sociologia digital: Uma breve introdução [Digital Sociology: A Brief Introduction]. EDUFBA.

Languages

Portuguese (Native) · English (Advanced) · French (Fluent) · Spanish (Intermediate)