

Nazareno Andrade

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[nazareno.github.io](https://github.com/nazareno) [Google Scholar profile](#)

Employment

2009-present: **Universidade Federal de Campina Grande (Brazil)**, Professor

- **Teach** Data Science, Data Visualization, Software Design, and Research Methods to Computer Science grad and undergrad students; teach Data Visualization and Storytelling for artists and journalists.
- **Research** on Data Science/Vis, Machine Learning, Civic Tech, and Social Computing.
- **Develop data-centric software and analysis projects** for various partners and contexts.
- **Coordinate** Lab Analytics, a Civic Data Science group.

2009-2011: **TU Delft (Netherlands)**, Post-doctoral researcher

- Applied **mixed methods** to study peer-production online communities
- Supervised PhD students
- Collaborated on a **multidisciplinary team** (computer scientists, economists, physicists, sociologists, and mathematicians).

2008 (6 months): **University of British Columbia (Canada)**, Visiting Scholar

- Research on **characterizing user behavior in peer production systems**

2004 (9 months) **Hewlett Packard Labs (UK)**, Research intern

- Research on Online Communities
- **Developed parallel computing software** that ran on [a 100-node datacenter](#)

Research

I am interested in the intersection of Data Science, Social Computing, and Human Factors, particularly with applications related to social justice, diversity, and music. In this context, I have worked with controlled experiments, characterization of large datasets, conception of theoretical frameworks, semi-structured interviews, and focal groups. I have:

- Systematized **how practitioners design Anthropographics** - Data Visualizations to promote compassion - (IEEE TCGV [paper](#), [open science](#), [catalog](#)) and conducted **A/B tests** to assess current practices' efficacy (ACM CHI [paper](#), [open science](#)).
- **Leveraged mixed-methods** to show how the design of Stack Overflow is perceived by users with varying cultural backgrounds (ACM CSCW [paper](#)) and to **examine user experience** with a situated physicalization (Pacifivis [paper](#))
- Created a trajectory-based **model for how listeners' attention changes and fixates on artists**. The model was learnt from 200M listens from Last.fm. (ISMIR [paper](#), [code](#))

- Applied a model of disruption and consolidation in innovation to find patterns in a network of artist influences from AllMusic (ISMIR [paper](#), [code](#)) and latent-space modelling to study a dynamic network of jazz artists from discogs (ISMIR [paper](#), [code](#))
- Characterized multifaceted contributor profiles in five large Q&A sites from the StackExchange platform using cross-sectional and longitudinal views (CSCW, [paper](#))
- Shown unfairness issues in the current use of Machine Learning by the Brazilian Government to estimate risk in public contracts ([paper](#)).
- Organized the Recys 2020 Challenge for predicting user engagement with tweets, and acted as Program Chair of the Brazilian Symposium on Collaborative Systems (SBSC)

This research has been published in venues such as ACM CHI (Human Factors in Computing Syst.), ACM CSCW (Computer-Supported Cooperative Work and Social Computing), and IEEE Transactions on Visualization and Computer Graphics. Collaborators include colleagues from UFMG (Brazil), TUDelft (Netherlands), UBC (Canada), Univ. of Washington (US), INRIA (France), IBM Research (Brazil, US), and Sorbonne Univ. (France).

Data and Technology projects

I coordinate since 2012 the Lab Analytics, a Civic Data Science group I co-founded at UFCG. The lab usually has 20-30 researchers and software engineers and developed projects funded by companies, government agencies, and NGOs.

These are some of the projects resulting in products in operation:

- [Parlametria](#) is a platform that uses NLP and predictive models to inform the advocacy actions of a network of more than 100 NGOs.
- [Datapedia Eleições](#) and [Olho N'Água](#) are visualization platforms/dashboards to explore large historical databases about elections and water reservoirs, respectively.
- [Tá de Pé](#) weekly crunches ~100GB to help citizens analyze governmental purchases of public-school meals and goods to fight the pandemic in Brazil.
- Data analysis reports for varied audiences, including [an analysis of campaign donations](#) received by members of the Brazilian Congress, [a retrospective of environmental law bills in the Congress in the last 2 years](#), and an exploration of [patterns in calls to a support line for Cancer patients](#).

In all projects, I was the main responsible for communication with stakeholders, software architecture, scientific lead of data analysis and modelling, and participated in coding.

Hacktivism

I conceived, helped organize, and facilitated four editions of the [Hackfest for Civic Participation](#), promoted by governmental auditing agencies, civil society, and Academia.

The largest Hackfest had 200 participants in a hackathon and 1500 attendants in talks and workshops. I also facilitated two replications of the event in Brazil and one in Colombia.

My team won the 1st prize in a national competition for Apps to Confront Corruption by the Brazilian Federal Government. I was a full-stack developer and data scientist in the project.

[House of Cunha](#) is a project that combines data visualization and statistics to unveil coalitions in the lower house in Brazil during 2014. The site got extensive media coverage and received more than 100K visitors. I talk about it [in this TEDx talk](#).

Because of these projects, I have spoken in national events organized by Government agencies (e.g., Data Analysis for the Public Administration Seminar) and represented hacktivism in boards related to social participation and transparency.

Education

2008 - PhD in Electrical Engineering (on a Computer Science topic) from UFCG.

2004 - MSc in Computer Science from UFCG, magna cum laude

2002 - B.Tech in Telematics from IFPB.

Relevant Technology Skills

Extensive experience programming in R, Python, JavaScript (including D3.js), Java and SQL. Some experience with Spark and Google Big Query. Experience with dashboard design and storytelling in Tableau and Flourish. Examples of training material (pt-br) are online on this [site](#), [code notebooks](#), and [youtube playlist](#).

Other interests

Playing musical instruments, djing, vinyl collecting, urban cycling, and dogs. [Visualizing music-related data for fun](#)