

Carolina Coimbra Vieira

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🌐 <https://carolcoimbra.github.io/>

EDUCATION

- **Max Planck Institute and Saarland University** **MPI & UdS**
Ph.D. Computer Science **2020–present**
Research topic: Migration, culture, and inequalities in algorithmically-mediated societies
- **Federal University of Minas Gerais** **UFMG**
M.Sc. Computer Science – GPA: 96/100 **2018–2020**
Thesis topic: A computational methodology to measure the cultural identity of countries.
- **Federal University of Minas Gerais** **UFMG**
B.Sc. Information Systems – GPA: 4.9/5.0 **2014–2017**
Thesis topic: Generating heterogeneous music playlists.

EXPERIENCE

- **Ph.D. student** **2020–present**
Laboratory of Digital and Computational Demography, MPIDR
Research on population dynamics in association with interests expressed in digital data.
- **Selection Committee Member** **2025–2025**
University of Manchester and Max Planck Institute for Demographic Research
Member of the selection committee for the PhD Studentship in Social Statistics with a focus on Digital and Computational Demography, jointly offered by the Max Planck Institute for Demographic Research and the University of Manchester (2025)
- **Seminar Chair** **2024–2025**
Seminar Chair in the Department of Digital and Computational Demography
Max Planck Institute for Demographic Research.
- **Organizer** **2025–2025**
Symposium Measuring Migration in Latin America 2025
Symposium Measuring Migration in Latin America: Leveraging digital traces, registers, censuses, and surveys
- **Lecturer and Workshop Organizer** **2024–2024**
Congreso de la Asociación Latinoamericana de Población 2024 (ALAP)
Course on "Opportunities and limits of working with digital data for the study of international migration"
- **Lecturer** **2024–2024**
Escola Nacional de Ciências Estatísticas IBGE
Big Data and Public Statistics Course: "Exploring Migration Patterns Using Digital Trace Data"
- **Lecturer** **2024–2024**
University of Rostock and Max Planck Institute for Demographic Research
Migration and Society Course: "Culture and Migration"

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- Lecturer and Workshop Organizer**
African Population Conference 2024
Workshop on "Exploring Migration Patterns using Digital Trace Data"

2024–2024
- Lecturer**
Summer Academy Neubeuern (Studienstiftung des deutschen Volkes)
"How Social Media are Shaping our World - Individual and Societal Consequences of Social Media Use"

2023–2023
- Lecturer**
Spring Academy Roggenburg (Studienstiftung des deutschen Volkes)
"Diversity from multiple perspectives - How we (can) observe cultural diversity in the context of migration"

2023–2023
- Selection Committee Member**
Max Planck Institute for Demographic Research
Member of the selection committee for postdoctoral positions in the Department of Digital and Computational Demography at the Max Planck Institute for Demographic Research

2022–2022
- Teaching Assistant (Deep Learning)**
Computer Science Department, Federal University of Minas Gerais

2021–2021
- Teaching Assistant (Machine Learning)**
Computer Science Department, Federal University of Minas Gerais

2020–2020
- Researcher**
WISEMAP Laboratory, Federal University of Minas Gerais
Research on topic modeling and LDA applied to song lyrics.
Research on complex networks applied to *fake news* dissemination on *WhatsApp*.

2018–2020
- Visiting researcher**
Laboratory of Digital and Computational Demography, MPIDR
Research about cultural aspects using social media data. This work includes the creation of a new methodology to evaluate the distance between countries in terms of cultural aspects collected from Facebook Ads.

2019–2019
- Teaching Assistant (Deep Learning)**
Computer Science Department, Federal University of Minas Gerais

2019–2019
- Tutor (Data Science)**
Computer Science Department, Federal University of Minas Gerais

2019–2019
- Research Assistant**
WISEMAP Laboratory, Federal University of Minas Gerais
Research about generating heterogeneous music playlists, including the creation of a new algorithm, STRAW (Steered Random Walker), that create playlists based on the similarity of songs represented by a graph.

2016–2017
- Research Assistant**
ICEX, Federal University of Minas Gerais
Research project with the Minister of Science and Technology (1992-1999). This project focused on modeling and predicting Brazilian social phenomena such as illiteracy rates and homicide rates.

2015–2016

AWARDS

- RESPECT fellowship**
Georgia Institute of Technology

2023
- Young Demographers Best Presentation Award**
Charles University

2022

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- **IDDP fellowship Grant \$12,000** 2022
◦ *Institute for Data, Democracy & Politics (IDDP) at the George Washington University*
- **SICSS Grant \$3,500** 2021
◦ *Summer Institute in Computational Social Sciences (SICSS)*
- **CSDE Lightning Talks & Poster Session Best Presentation Award** 2021
◦ *University of Washington*
- **1st place in the Best Student Award** 2018
◦ *Federal University of Minas Gerais*
- **Honorable Mention in Data Visualization Project** 2017
◦ *Federal University of Minas Gerais*
- **NAACL Scholarship for the JSALT Summer School** 2017
◦ *Carnegie Mellon University (CMU)*
NAACL Scholarship for the JSALT Summer School on Speech and Language Technology at CMU.

OTHER ACTIVITIES

- **Participated – Data Donation Symposium** 2024
◦ *University of Amsterdam*
- **Participated – Summer Institute in Computational Social Sciences (SICSS)** 2021
◦ *Princeton University (online)*
- **Participated – Course: Population Health** 2020
◦ *Max Planck Institute for Demographic Research*
- **Participated – Course: Topics in Digital and Computational Demography** 2020
◦ *Max Planck Institute for Demographic Research*
- **Participated – Course: Demographic Methods** 2020
◦ *Max Planck Institute for Demographic Research*
- **Participated – Pre-doctoral Research School - online Summer School** 2020
◦ *Max Planck Institute for Software Systems*
- **Participated – Data visualization – the art/skill cocktail - online course** 2020
◦ *Max Planck Institute for Demographic Research*
- **Participated – JSALT Summer School on Speech and Language Technology** 2017
◦ *Carnegie Mellon University*
- **Participated – Summer School in Computer Science** 2015–2017
◦ *Federal University of Minas Gerais*

SKILLS

- Python, R, C;
- LaTeX, Text-Processing Commands (POSIX);
- Data science (Data mining, Data visualization, and Machine Learning);
- Portuguese (native), English (advanced), Spanish (basic).

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SELECTED TALKS

- o "Characterizing Global Gender Gaps in STEM Using Facebook Data". The International Conference on Scientometrics & Informetrics 2025 (ISSI 2025).
- o "Exploring ChatGPT as a tool for automated classification of authors' positivity perspectives on Russian topics". Workshop on The Use of Generative AI for Science of Science and Higher Education Studies 2025 (AISci).
- o "Using Digital Trace Data for Demographic Research". Congreso de la Asociación Latinoamericana de Población 2024 (ALAP '24)
- o "Digital demography in migration studies: Applications and challenges for Latin America". Live Webinar ABEP 2024.
- o "Using Wikipedia data to monitor big migration events"
 - 1st Conference on Computational Social Science 2025 (CS2Italy2025)
 - Congreso de la Asociación Latinoamericana de Población 2024 (ALAP '24)
 - International Migration in Central and Eastern Europe 2024
 - International Conference on Computational Social Science 2024 (IC2S2 '24)
 - European Population Conference 2024 (EPC '24)
 - African Population Conference 2024 (APC '24)
 - Annual Meeting - Population Association of America 2024 (PAA '24)
 - Workshop on "Computational Social Science: AI and Society – Exploring Inequality in the Digital Age" 2025
 - Wiki Workshop 2025
 - 4th International Forum on Migration Statistics 2025 (IFMS 25)
- o "The value of cultural similarity for predicting migration: evidence from food and drink interests in digital trace data".
 - Seminario sobre Gestión y Generación de Datos Sociodemográficos 2023
 - Symposium Measuring Migration in Latin America 2025
- o "The value of cultural similarity for predicting migration: evidence from food and drink preferences in Facebook data"
 - XX ISA World Congress of Sociology 2023 (ISA '23)
 - Giornate di Studio sulla Popolazione (PopDays 2023)
 - Alpine Population Conference (ALP-POP 2023)
- o "Edits on Wikipedia in response to big migration events"
 - Annual Conference of the British Society for Population Studies 2023 (BSPS '23)
 - International Conference on Computational Social Science 2023 (IC2S2 '23)
 - Annual Meeting - Population Association of America 2023 (PAA '23)
- o "Contrasting global gender gaps in STEM using Facebook data and offline indicators"
 - International Conference on Computational Social Science 2023 (IC2S2 '23)
 - XX ISA World Congress of Sociology 2023 (ISA '23)

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- Annual Meeting - Population Association of America 2023 (PAA '23)
- Annual International Conference of Young Demographers 2023
- Giornate di Studio sulla Popolazione (PopDays 2023)
- o "Evaluating digital polarization in multi-party systems: evidence from the German Bundestag". International Conference on Computational Social Science 2022 (IC2S2 '22).
- o "Desaparecidos: characterizing the population of missing children using Twitter". The Web Science Conference 2022 (WebSci '22).
- o "The value of culture for predicting migration: evidence from Facebook data".
 - National Meeting of Population Studies 2022
 - Workshop on Migration and mobility research in the digital era (MIMODE) at Conference on Complex Systems (CCS '22)
 - Portuguese Conference of Demography 2022 (APD '22)
 - Annual Conference of the British Society for Population Studies 2022 (BSPS '22)
 - International Conference on Migration and Mobilities 2022 (iMigMob '22)
 - International Conference on Computational Social Science 2022 (IC2S2 '22)
- o "Cultural similarities predict migration over and above shared location, shared language, and shared history".
 - European Population Conference 2022 (EPC '22)
 - Annual Meeting - Population Association of America 2022 (PAA '22)
 - Annual International Conference of Young Demographers 2022
- o "The Role of Migration in Shaping Cultural Proximity across Countries: Evidence from Facebook Data on National Cuisines".
 - New data for the new challenges of population and society 2021
 - International Conference on Computational Social Science 2021 (IC2S2 '21)
 - Annual Meeting - Population Association of America 2021 (PAA '21)
- o "The interplay of migration and cultural similarity between countries: evidence from Facebook data on food and drink interests". XXIX International Population Conference (IPC '21).
- o "Using Facebook Ads Data to Assess Gender Balance in STEM: Evidence from Brazil". Workshop Data Science for Social Good - The Web Conference 2021 (WWW '21).
- o "Assessing Cultural Distance between Countries using Facebook Data: The Case of Food as a Cultural Marker and the Role of Migration". CSDE Winter 2021 Lightning Talk & Poster Session 2021.
- o "Using Facebook Data to Measure Cultural Distance between Countries: the Case of Brazilian Cuisine". The Web Conference 2020 (WWW '20).
- o "Using Facebook Data to Expand Multidimensional Measures of Distance between Countries". Annual Meeting - Population Association of America 2020 (PAA '20).

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SELECTED PUBLICATIONS

- o **Vieira, Carolina C.**; Vasconcelos, Marisa. "Characterizing Global Gender Gaps in STEM Using Facebook Data." In Proceedings of 20th International Conference on Scientometrics & Informetrics 2025 (ISSI 2025).
- o **Vieira, Carolina C.**; Chechik, E.; Di Césare, V. "Beyond Sentiment Analysis with ChatGPT: Classifying Authors' Perspectives on Russian Topics." In Proceedings of 20th International Conference on Scientometrics & Informetrics 2025 (ISSI 2025).
- o Zhao, Y.; Paul, R.; Reid, S.; **Vieira, Carolina C.**; Wolfe, C.; Zhang, Y.; Chunara, R. "Constructing Social Vulnerability Indexes with Increased Data and Machine Learning Highlight the Importance of Wealth Across Global Contexts." Social Indicators Research (2024).
- o **Vieira, Carolina C.**; Lohmann, Sophie; Zagheni, Emilio. "The Value of Cultural Similarity for Predicting Migration: Evidence from Food and Drink Interests in Digital Trace Data." Population and Development Review (2024).
- o **Vieira, Carolina C.**; Fatehkia, M.; Garimella, K.; Weber, I.; Zagheni, E.. "Using Facebook and LinkedIn data to study international mobility". In: Salah, A. A.; Eren Korkmaz, E.; Bircan, T. (Eds.): Data science for migration and mobility. Oxford: Oxford University Press (2022).
- o **Vieira, Carolina C.**; Alburez-Gutierrez, Diego; Nepomuceno, Marilia R.; Theile, Tom. "Desaparecidos: characterizing the population of missing children using Twitter." In Proceedings of the 14th ACM Web Science Conference 2022 (WebSci '22).
- o Chin, Amber; **Vieira, Carolina C.**; Kim, Jisu. "Evaluating Digital Polarization in Multi-Party Systems: Evidence from the German Bundestag." In Proceedings of the 14th ACM Web Science Conference 2022 (WebSci '22).
- o **Vieira, Carolina C.**; Lohmann, Sophie; Zagheni, Emilio; de Melo, Pedro O. V.; Benevenuto, Fabrício; Ribeiro, Filipe N. "The interplay of migration and cultural similarity between countries: Evidence from Facebook data on food and drink interests." PLoS ONE 17(2): e0262947. (2022).
- o **Vieira, Carolina C.**; Vasconcelos, Marisa. "Using Facebook Ads Data to Assess Gender Balance in STEM: Evidence from Brazil." In Companion Proceedings of The Web Conference 2021 (WWW '21).
- o **Vieira, Carolina C.**; Ribeiro, Filipe N.; de Melo, Pedro O. V.; Benevenuto, Fabrício; Zagheni, Emilio. "Using Facebook Data to Measure Cultural Distance between Countries: the Case of Brazilian Cuisine." In Proceedings of The Web Conference 2020 (WWW '20).
- o de Almeida, Marcos A.; **Vieira, Carolina C.**; de Melo, Pedro O. V.; Assunção, Renato M. "Random Playlists Smoothly Commuting Between Styles." ACM Transactions on Multimedia Computing, Communications, and Applications (TOMM) 15, no. 4 (2019): 1-20. 2019.

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- o Melo, Philipe de Freitas; **Vieira, Carolina C.**; Garimella, Kiran; de Melo, Pedro O. V.; Benevenuto, Fabrício. "Can WhatsApp Counter Misinformation by Limiting Message Forwarding?". In International Conference on Complex Networks and Their Applications, 372-384. 2019.
- o **Vieira, Carolina C.**; Loures, Túlio C.; de Melo, Pedro O. V.; Assunção, Renato M. "The Times They Are A-Changin' (or not): song lyrics analysis over the years". Proceedings of the 25th Brazillian Symposium on Multimedia and the Web, 237-244. 2019.
- o **Vieira, Carolina C.**; Melo, Philipe de Freitas; de Melo, Pedro O. V.; Benevenuto, Fabrício. "Viralização de Informação em Redes de Grupos como o *Whatsapp*". Proceedings of the 37th Brazillian Symposium on Computer Networks and Distributed Systems. 2019.
- o de Almeida, Marcos A.; **Vieira, Carolina C.**; de Melo, Pedro O. V.; Assunção, Renato M. "The Fast and Winding Roads that Lead to The Doors: Generating Heterogeneous Music Playlists". Proceedings of the 23rd Brazillian Symposium on Multimedia and the Web, 269-276. 2017.
- o de Almeida, Marcos A.; **Vieira, Carolina C.**; de Melo, Pedro O. V.; Assunção, Renato M. "ROPE and STRAW: Automatic Music Playlist Generators". Anais Estendidos do XXIII Simpósio Brasileiro de Sistemas Multimídia e Web. 2017.

WORKING PAPERS

- o **Vieira, Carolina C.**; Sanliturk, Ebru; Zagheni, Emilio. "Wikipedia as a Tool for Tracking Mass Migration Flows: Insights from the Russian Invasion of Ukraine" (2025).
- o **Vieira, Carolina C.**; Mousavi, S.; Dash, A.; Ayalon, O.; Gummadi, K. P.; Zannettou, S. "On the (Un)Predictability of User Watching Behavior with Short Format Videos on TikTok" (2025).
- o **Vieira, Carolina C.**; Chechik, E.; Di Césare, V. "Exploring ChatGPT as a tool for automated classification of US authors' positivity perspectives on Russian topics" (2025).