

# Carolina Coimbra Vieira

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🌐 <https://carolcoimbra.github.io/>

## EDUCATION

### Max Planck Institute and Saarland University

- *Ph.D. Computer Science*

Research topic: Migration, culture, and inequalities in algorithmically-mediated societies

MPI & UdS

2020–present

### Federal University of Minas Gerais

- *M.Sc. Computer Science – GPA: 96/100*

Thesis topic: A computational methodology to measure the cultural identity of countries.

UFMG

2018–2020

### Federal University of Minas Gerais

- *B.Sc. Information Systems – GPA: 4.9/5.0*

Thesis topic: Generating heterogeneous music playlists.

UFMG

2014–2017

## 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.

### Organizer

2025–2025

- *SICSS-Saarbrücken 2025*

Summer Institute in Computational Social Science

### Lecturer and Workshop Organizer

2025–2025

- *International Population Conference 2025*

Workshop on "Exploring Migration Patterns using Digital Trace 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"

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<b>Lecturer</b>	<b>2024–2024</b>
◦ <i>Escola Nacional de Ciências Estatísticas IBGE</i> Big Data and Public Statistics Course: "Exploring Migration Patterns Using Digital Trace Data"	
<b>Lecturer</b>	<b>2024–2024</b>
◦ <i>University of Rostock and Max Planck Institute for Demographic Research</i> Migration and Society Course: "Culture and Migration"	
<b>Lecturer and Workshop Organizer</b>	<b>2024–2024</b>
◦ <i>African Population Conference 2024</i> Workshop on "Exploring Migration Patterns using Digital Trace Data"	
<b>Lecturer</b>	<b>2023–2023</b>
◦ <i>Summer Academy Neubeuern (Studienstiftung des deutschen Volkes)</i> "How Social Media are Shaping our World - Individual and Societal Consequences of Social Media Use"	
<b>Lecturer</b>	<b>2023–2023</b>
◦ <i>Spring Academy Roggenburg (Studienstiftung des deutschen Volkes)</i> "Diversity from multiple perspectives - How we (can) observe cultural diversity in the context of migration"	
<b>Selection Committee Member</b>	<b>2022–2022</b>
◦ <i>Max Planck Institute for Demographic Research</i> Member of the selection committee for postdoctoral positions in the Department of Digital and Computational Demography at the Max Planck Institute for Demographic Research	
<b>Teaching Assistant (Deep Learning)</b>	<b>2021–2021</b>
◦ <i>Computer Science Department, Federal University of Minas Gerais</i>	
<b>Teaching Assistant (Machine Learning)</b>	<b>2020–2020</b>
◦ <i>Computer Science Department, Federal University of Minas Gerais</i>	
<b>Researcher</b>	<b>2018–2020</b>
◦ <i>WISEMAP Laboratory, Federal University of Minas Gerais</i> Research on topic modeling and LDA applied to song lyrics. Research on complex networks applied to fake news dissemination on WhatsApp.	
<b>Visiting researcher</b>	<b>2019–2019</b>
◦ <i>Laboratory of Digital and Computational Demography, MPIDR</i> 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.	
<b>Teaching Assistant (Deep Learning)</b>	<b>2019–2019</b>
◦ <i>Computer Science Department, Federal University of Minas Gerais</i>	
<b>Tutor (Data Science)</b>	<b>2019–2019</b>
◦ <i>Computer Science Department, Federal University of Minas Gerais</i>	
<b>Research Assistant</b>	<b>2016–2017</b>
◦ <i>WISEMAP Laboratory, Federal University of Minas Gerais</i> 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.	
<b>Research Assistant</b>	<b>2015–2016</b>
◦ <i>ICEX, Federal University of Minas Gerais</i> 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.	

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## SKILLS

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

## AWARDS

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<b>RESPECT fellowship</b>	2023
○ <i>Georgia Institute of Technology</i>	
<b>Young Demographers Best Presentation Award</b>	2022
○ <i>Charles University</i>	
<b>IDDP fellowship Grant \$12,000</b>	2022
○ <i>Institute for Data, Democracy &amp; Politics (IDDP) at the George Washington University</i>	
<b>SICSS Grant \$3,500</b>	2021
○ <i>Summer Institute in Computational Social Sciences (SICSS)</i>	
<b>CSDE Lightning Talks &amp; Poster Session Best Presentation Award</b>	2021
○ <i>University of Washington</i>	
<b>1st place in the Best Student Award</b>	2018
○ <i>Federal University of Minas Gerais</i>	
<b>Honorable Mention in Data Visualization Project</b>	2017
○ <i>Federal University of Minas Gerais</i>	
<b>NAACL Scholarship for the JSALT Summer School</b>	2017
○ <i>Carnegie Mellon University (CMU)</i>	
NAACL Scholarship for the JSALT Summer School on Speech and Language Technology at CMU.	

## OTHER ACTIVITIES

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<b>Participated – Tutorial: Bridging Human and LLM Annotations</b>	2025
○ <i>Norrköping, Sweden – International Conference on Computational Social Science</i>	
<b>Participated – Tutorial: The Role of AI in Misinformation</b>	2025
○ <i>Norrköping, Sweden – International Conference on Computational Social Science</i>	
<b>Participated – Data Donation Symposium</b>	2024
○ <i>University of Amsterdam</i>	
<b>Participated – Tutorial: Computational Social Science from Space</b>	2023
○ <i>Copenhagen, Denmark – International Conference on Computational Social Science</i>	
<b>Participated – Tutorial: Capturing Human Values during Controversies</b>	2023
○ <i>Copenhagen, Denmark – International Conference on Computational Social Science</i>	
<b>Participated – Summer Institute in Computational Social Sciences (SICSS)</b>	2021
○ <i>Princeton University (online)</i>	
<b>Participated – Course: Population Health</b>	2020
○ <i>Max Planck Institute for Demographic Research</i>	
<b>Participated – Course: Topics in Digital and Computational Demography</b>	2020
○ <i>Max Planck Institute for Demographic Research</i>	

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<b>Participated – Course: Demographic Methods</b>	<b>2020</b>
◦ <i>Max Planck Institute for Demographic Research</i>	
<b>Participated – Pre-doctoral Research School - online Summer School</b>	<b>2020</b>
◦ <i>Max Planck Institute for Software Systems</i>	
<b>Participated – Data visualization – the art/skill cocktail - online course</b>	<b>2020</b>
◦ <i>Max Planck Institute for Demographic Research</i>	
<b>Participated – JSALT Summer School on Speech and Language Technology</b>	<b>2017</b>
◦ <i>Carnegie Mellon University</i>	
<b>Participated – Summer School in Computer Science</b>	<b>2015–2017</b>
◦ <i>Federal University of Minas Gerais</i>	

## **SELECTED TALKS**

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- "On the (Un)Predictability of User Watching Behavior with Short Format Videos on TikTok". Symposium on Challenges in a Digitalised Society at MPI for Security and Privacy 2025.
- "Characterizing Global Gender Gaps in STEM Using Facebook Data". The International Conference on Scientometrics & Informetrics 2025 (ISSI 2025).
- "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).
  - International Conference on Computational Social Science 2025 (IC2S2 '25).
- "Using Digital Trace Data for Demographic Research". Congreso de la Asociación Latinoamericana de Población 2024 (ALAP '24)
- "Digital demography in migration studies: Applications and challenges for Latin America". Live Webinar ABEP 2024.
- "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)
  - 30th International Population Conference 2025 (IPC 2025)

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- "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
- "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)
- "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)
- "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)
  - Annual Meeting - Population Association of America 2023 (PAA '23)
  - Annual International Conference of Young Demographers 2023
  - Giornate di Studio sulla Popolazione (PopDays 2023)
- "Evaluating digital polarization in multi-party systems: evidence from the German Bundestag". International Conference on Computational Social Science 2022 (IC2S2 '22).
- "Desaparecidxs: characterizing the population of missing children using Twitter". The Web Science Conference 2022 (WebSci '22).
- "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)
- "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

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- "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)
- "The interplay of migration and cultural similarity between countries: evidence from Facebook data on food and drink interests". XXIX International Population Conference (IPC '21).
- "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).
- "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.
- "Using Facebook Data to Measure Cultural Distance between Countries: the Case of Brazilian Cuisine". The Web Conference 2020 (WWW '20).
- "Using Facebook Data to Expand Multidimensional Measures of Distance between Countries". Annual Meeting - Population Association of America 2020 (PAA '20).

## **SELECTED PUBLICATIONS**

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- **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).
- **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).
- 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).
- **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).
- **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).
- **Vieira, Carolina C.**; Alburez-Gutierrez, Diego; Nepomuceno, Marilia R.; Theile, Tom. "Desaparecidxs: characterizing the population of missing children using Twitter." In Proceedings of the 14th ACM Web Science Conference 2022 (WebSci '22).

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- 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).
- **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).
- **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).
- **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).
- 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.
- 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.
- **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.
- **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.
- 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.
- 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.

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## WORKING PAPERS

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- **Vieira, Carolina C.**; Sanliturk, Ebru; Zagheni, Emilio. "Wikipedia as a Tool for Tracking Mass Migration Flows: Insights from the Russian Invasion of Ukraine" (2025).
- **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).
- **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).

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