Carolina Coimbra Vieira

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 https://carolcoimbra.github.io/

EDUCATION

Max Planck Institute for Demographic Research **MPIDR**
Ph.D. in Computer Science *2020–present*
International Max Planck Research School for Population, Health and Data Science (IMPRS-PHDS)
Research topic: Population dynamics in association with interests expressed in digital data

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**
*Bachelor of Information System – **GPA: 4.9/5.0*** *2014–2017*
Thesis topic: Generating heterogeneous music playlists.

EXPERIENCE

Seminar Chair **2024–present**
Seminar Chair in the Department of Digital and Computational Demography
Max Planck Institute for Demographic Research.

Lecturer **2024–2024**
Migration and Society Course
University of Rostock and Max Planck Institute for Demographic Research.

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

Lecturer **2023–2023**
Summer Academy Neubeuern
Summer Academy Neubeuern organized by Studienstiftung des deutschen Volkes.
"How Social Media are Shaping our World - Individual and Societal Consequences of Social Media Use"

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

Ph.D. student **2020–present**
Laboratory of Digital and Computational Demography, MPIDR
Research on population dynamics in association with interests expressed in digital data.

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

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○ **Teaching Assistant (Machine Learning)** 2020–2020
Computer Science Department, Federal University of Minas Gerais

○ **Researcher** 2018–2020
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*.

○ **Visiting researcher** 2019–2019
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.

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

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

○ **Research Assistant** 2016–2017
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.

○ **Research Assistant** 2015–2016
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.

AWARDS

○ **Achievement – RESPECT fellowship** 2023
Georgia Institute of Technology

○ **Young Demographers Best Presentation Award** 2022
Charles University

○ **Achievement – IDDP fellowship Grant** 2022
Institute for Data, Democracy & Politics (IDDP) at the George Washington University

○ **SICSS Grant** 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** 2017
Federal University of Minas Gerais
Honorable Mention for the project presented in the Competition of Data Visualization.
Work available on: http://carolcoimbra.github.io/.

○ **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.

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SKILLS

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

OTHER ACTIVITIES

o **Participated – Data Donation Symposium**   **2024**
University of Amsterdam

o **Participated – Summer Institute in Computational Social Sciences (SICSS)**   **2021**
Princeton University (online)

o **Participated – Course: Population Health**   **2020**
Max Planck Institute for Demographic Research

o **Participated – Course: Topics in Digital and Computational Demography**   **2020**
Max Planck Institute for Demographic Research

o **Participated – Course: Demographic Methods**   **2020**
Max Planck Institute for Demographic Research

o **Participated – Pre-doctoral Research School - online Summer School**   **2020**
Max Planck Institute for Software Systems

o **Participated – Data visualization – the art/skill cocktail - online course**   **2020**
Max Planck Institute for Demographic Research

o **Participated – JSALT Summer School on Speech and Language Technology**   **2017**
Carnegie Mellon University

o **Participated – Summer School in Computer Science**   **2015–2017**
Federal University of Minas Gerais

SELECTED TALKS

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"
  - 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)

o "Exploring migration patterns using digital trace data". African Population Conference 2024 (APC '24)

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

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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)
  - 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 "Desaparecidxs: 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)

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- "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

- 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).

- 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).

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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.

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.