

Carolina Coimbra Vieira

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EDUCATION

- **Max Planck Institute for Demographic Research** **MPIDR**
Ph.D. 2020–present
International Max Planck Research School for Population, Health and Data Science (IMPRS-PHDS)
Research topic: Using Social Media Data to Assess Migration and Cultural Distance between Countries.
- **Federal University of Minas Gerais** **UFMG**
M.Sc. Computer Science 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: Research about Generating Heterogeneous Music Playlists.

EXPERIENCE

- **Ph.D. student** 2020–present
Digital and Computational Demography Laboratory, MPI for Demographic Research
Research about migration, gender gap, and cultural distance between countries using social media data.
- **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 about topic modeling and LDA applied to song lyrics.
Research about complex networks applied to *fake news* dissemination on *WhatsApp*.
- **Visiting researcher** 2019–2019
Digital and Computational Demography Laboratory, MPI for Demographic Research
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. This work included the creation of a new algorithm that create playlists based on the similarity of songs represented by a graph. The algorithm, STRAW (Steered Random Walker), that navigates on a similarity graph can be tested on the webpage of the project that can be accessed here: <http://musicplaylist.esy.es/>. This work was submitted and accepted to WebMedia 2017.
- **Research Assistant** **2015–2016**
○ *ICEX, Federal University of Minas Gerais*
Research project with the Minister of Science and Technology, between 1992 and 1999. The aim of this project is to model and predict Brazilian social phenomena like the illiteracy rate and the homicide rate. In this project, I worked with a mathematical model to model events of interest and predict its course during the years. This project was very important for my development because was my first experience in a research area and I could practice a lot of mathematical concepts and work with one of the most important people in the field of science in Brazil.
- **Junior Entrepreneur** **2014–2016**
○ *UFMG Informática Júnior, Federal University of Minas Gerais*
I worked on a junior enterprise, UFMG Informática Júnior. During this work, I developed skills like creativity, project management, team-working, learning, and sharing knowledge. I worked in the human resources department and because of it, I developed projects to measure and analyze the satisfaction of the students who were working and also of the clients of UFMG Informática Júnior. Also, recruiting is a very important event in the company and I was responsible to formulate and conduct the interview to select new students to work in UFMG Informática Júnior.

SKILLS

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

OTHER ACTIVITIES

- **Participated – Pre-doctoral Research School - online Summer School** **2020**
○ *Max Planck Institute for Software Systems*
- **Participated – “Physical Sensing and Processing” - online Summer School** **2020**
○ *University of Bologna*
- **Participated – Data visualization – the art/skill cocktail - online course** **2020**
○ *Max Planck Institute for Demographic Research*
- **Achievement – 1st place in the Best Student Award** **2018**
○ *Federal University of Minas Gerais*

- **Achievement – 3rd place in the Competition of Code** 2017
○ *Federal University of Minas Gerais*
- **Achievement – Honorable Mention** 2017
○ *Federal University of Minas Gerais*
Honorable Mention for project presented in the Competition of Data Visualization.
Work available on: <http://carolcoimbra.github.io/>.
- **Achievement – NAACL Scholarship for the JSALT Summer School** 2017
○ *Carnegie Mellon University*
NAACL Scholarship for the JSALT Summer School on Speech and Language Technology at Carnegie Mellon University.
- **Participated – “Escola de Verão em Computação”** 2015–2017
○ *Federal University of Minas Gerais*
“Escola de Verão em Computação” an event with lectures and courses about some researches areas in the department of Computer Science offered by Federal University of Minas Gerais.

SELECTED PUBLICATIONS

- **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.