

# César Pedrosa Soares

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[GitHub](#)

[Medium](#)

## Professional Experience

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### Psychometrician/Data Analyst

March/2022 – Currently

Center for Public Policy and Evaluation of Education, Brazil (remote work)

- Mining and analyzing data
- Conducting psychometric analyzes (Classical Test Theory/Item Response Theory – equating, scoring, validation etc.)
- Development of scales (Rasch/3PL) for educational summative and formative assessments
- Conducting Natural Language Processing (NLP)
- Public policy analysis and impact assessment
- Preparation of technical reports

### Psychometrician/Data Analyst

2018 – 2022

Research group, University of São Paulo, Brazil

- Mining and analyzing data
- Conducting psychometric analyzes (Classical Test Theory/Item Response Theory)
- Conducting Natural Language Processing (NLP)
- Public policy analysis and impact assessment
- Conducting spatial analyzes
- Preparation of technical reports

### Expert Advisor

2018

United Nations Educational, Scientific and Cultural Organization (UNESCO), Brazil

- Mining and analyzing data
- Preparation of technical reports

## Formal Education

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### Ph.D. in Global Health and Sustainability

2018 – 2022

University of São Paulo, Brazil

Title: Financial Compensation Policy in the Contemporary World: limits and possibilities in the search for hybrid territories

### Master's in Public Policy

2016 – 2018

Federal University of Rio Grande do Sul, Brazil

Title: Public Policies and Basic Health Care: impact evaluation

### Bachelor's in Psychology

2010 – 2015

University Center of Brasília, Brazil

Title: Proposal of a psychometric instrument to evaluate the implementation of Psychosocial Care Centers

## Volunteer work

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### Climate Reality Leader volunteer

2020 – Currently

The Climate Reality Project, USA (remote work)

- Mining and analyzing data
- Preparation of technical reports

<b>Volunteer psychologist</b> Red Cross of São Paulo, Brazil	2019
<ul style="list-style-type: none"> <li>• Psychosocial care</li> </ul>	
<b>Play Volunteer</b> Red Cross War Memorial Children's Hospital, South Africa	2014
<ul style="list-style-type: none"> <li>• Psychosocial care</li> </ul>	

## Complementary Training

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<b>Integrated courses program: Natural Language Processing</b> DeepLearning.AI/Coursera (Online Course)	2020
<ul style="list-style-type: none"> <li>• Natural Language Processing with Classification and Vector Spaces</li> <li>• Natural Language Processing with Probabilistic Models</li> <li>• Natural Language Processing with Sequence Models</li> <li>• Natural Language Processing with Attention Models</li> </ul>	
<b>Integrated courses program: Deep Learning</b> DeepLearning.AI/Coursera (Online Course)	2020
<ul style="list-style-type: none"> <li>• Neural Networks and Deep Learning</li> <li>• Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization</li> <li>• Structuring Machine Learning Projects</li> <li>• Convolutional Neural Networks</li> <li>• Sequence Models</li> </ul>	
<b>Foundations of Data Science</b> London University/Coursera (Online Course)	2020
<ul style="list-style-type: none"> <li>• K-Means Clustering in Python</li> </ul>	
<b>Brazilian Delegation</b> International School 2020, BRICS (Online Course)	2020
<ul style="list-style-type: none"> <li>• Mining and analyzing data</li> <li>• Preparation of technical reports</li> <li>• Sustainable development</li> </ul>	
<b>Research internship</b> University of Münster, Germany	2019 – 2020
<ul style="list-style-type: none"> <li>• Mining and analyzing data</li> <li>• Preparation of technical reports</li> <li>• Sustainable development</li> </ul>	
<b>Philosophy Course</b> University of Brasília/Federal University of São Paulo, Brazil	2013 –2019

## Selected Skills

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### Data analysis programs:

- SPSS (advanced)
- STATA (advanced)
- R/Python (advanced)
- ArcGIS/QGIS (advanced)
- NVivo (advanced)
- BILOG-MG

**Statistical analysis:**

- Artificial Intelligence: clustering algorithms and Deep Learning for Image Processing and applied to Natural Language Processing (NLP)
- Psychometric techniques (Classical Test Theory and Item Response Theory)
- Methodology difference in differences and propensity score matching: applied to the impact assessment of public policies
- Spatial regression

**Office package:**

- Excel (advanced)
- Word (advanced)
- PowerPoint (advanced)

**Language:**

- Portuguese (Native proficiency)
- English (Fluent)
- Spanish (Reading and listening comprehension)
- French (Reading and listening comprehension)
- German (Reading comprehension)

**Honors and Awards**

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**Special Prize****2020**

Towards a Brighter Future in the BRICS Young Scientists Competition

Title: BRICS and Climate Governance: a proposed psychometric instrument to assess progress in addressing socio-economic and environmental inequalities

**1<sup>st</sup> place****2020**

Challenge – Fight against COVID-19, Free School of Artificial Intelligence

**Scientific Initiation Award and Honorable Mention****2015**

21<sup>st</sup> Congress of Scientific Initiation of the University of Brasilia/12<sup>th</sup> Congress of Scientific Initiation of the Federal District of Brazil

**Bibliographical Production**

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**Articles in Scientific Journals/Pre-prints**

1. SOARES, C. P.; VASCONCELLOS, M. P. Proposal of a socio-environmental vulnerability scale of municipalities that receive financial compensation – Brazil. SocArXiv, 2022. Link: <https://osf.io/preprints/socarxiv/jg4a8>

2. SOARES, L. P.; SOARES, C. P. Automatic Detection of COVID-19 Cases on X-ray images Using Convolutional Neural Networks. arXiv preprint arXiv:2007.05494, 2020.  
Link: <https://arxiv.org/abs/2007.05494>

3. SOARES, C. P.; RAMOS, M. An evaluation of PMAQ-AB effects on hospitalization for conditions susceptible to Primary Care. Saúde Debate, v.44(16), 2020.  
Link: <https://www.scielo.br/j/sdeb/a/DnLDYLbBQhznRMsh5NQpNCt/?lang=en>

4. SOARES, C. P.; QUEIROGA, F. Mental Health Devices and Public Policies: proposal of an instrument to evaluate the implementation of the Psychosocial Care Centers. Revista Meta: Avaliação, [S.l.], v. 11, n. 32, p. 438 - 467, ago. 2019. (Text in Portuguese)  
Link: <https://revistas.cesgranrio.org.br/index.php/metaavaliacao/article/view/1938>

## Technical Reports

1. SOARES, C. P. et al. Impact evaluation of the federal Brazilian public policy "Tempo de Aprender". CAEd and Ministry of Education of Brazil, Dec., 2022. (Text in Portuguese)

Link: [http://alfabetizacao.mec.gov.br/images/pdf/avaliacao\\_de\\_impacto\\_tempo\\_de\\_aprender.pdf](http://alfabetizacao.mec.gov.br/images/pdf/avaliacao_de_impacto_tempo_de_aprender.pdf)

## Book/eBook

1. SOARES, C. P. et al. Why climate justice?. Climate justice working group. The Climate Reality Project Brazil, 2022. (Text in Portuguese)

Link: <https://materiais.brazilclimatechange.com/e-book-para-que-justica-climatica>

## Articles in Newspapers/Magazines

1. SOARES, C. P.; VASCONCELLOS, M. P. C. Compensation instruments and the socio-environmental impacts of the energy transition in contemporary times. Jornal da USP/Universidade de São Paulo, Artigos, 29 Nov. 2022. (Text in Portuguese)

Link: <https://jornal.usp.br/artigos/instrumentos-de-compensacao-e-os-impactos-socioambientais-da-transicao-energetica-na-contemporaneidade/>

2. RIBEIRO, D. G.; SOARES, C. P.; BACCHIEGGA, F.; VASCONCELLOS, M. P. C. São Paulo Elections: the unsustainable silence around the environmental issue. Jornal da USP/Universidade de São Paulo, Artigos, 16 Dez. 2020. (Text in Portuguese)

Link: <https://jornal.usp.br/artigos/eleicoes-de-sao-paulo-o-insustentavel-silencio-ao-redor-da-questao-ambiental/>

3. CARBONE, A. S.; VASCONCELLOS, M. P. C.; COUTINHO, SMV; SOARES, C. P.; RIBEIRO, D. G. Revisiting concept and principles of territorial planning in the Brazilian reality. Jornal da USP/Universidade de São Paulo, Artigos, 07 Ago. 2019. (Text in Portuguese)

Link: <https://jornal.usp.br/artigos/revisitando-conceito-e-principios-de-ordenamento-territorial-na-realidade-brasileira/>