

## Francielle Vargas, MSc and PhD in Artificial Intelligence

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<https://francielleavargas.github.io/>

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**Main Skills**      Natural Language Processing  
Computational Social Science  
Machine Learning

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**Education**      *PhD, Computer Science and Computational Mathematics*  
University of São Paulo  
Thesis: Socially Responsible and Explainable Fact-Checking and Hate Speech Detection.  
Artificial Intelligence and Natural Language Processing  
2019 - 2024

*MSc, Computer Science and Computational Mathematics*  
University of São Paulo  
Thesis: Semantic Clustering of Aspects for Opinion Mining. [see](#)  
Artificial Intelligence and Natural Language Processing  
2015 - 2017

*BA, Linguistics*  
Federal University of Minas Gerais

*BS, Information Systems*  
Pontifical Catholic University of Minas Gerais

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**Experience**      2024-2024: *Google PhD Fellowship*, Federal University of Minas Gerais, Brazil  
2024-2024: *Visiting Researcher*, University of Southern California, USA  
2023-2023: *Invited Researcher*, Leibniz Institute for the Social Sciences, Germany  
2021-2022: *Data Scientist*, Cisco Webex, USA  
2015-2023: *Graduate Researcher*, University of São Paulo, Brazil  
2014-2015: *System Analyst*, Unisys, Brazil  
2010-2014: *Research Assistant*, Federal University of Minas Gerais, Brazil  
2008-2010: *System Analyst*, Grupo Barcelos, Brazil

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**Courses**      2024: *2nd Mexican NLP Summer School*, NAACL 2024, Mexican. [see](#)  
2023: *2nd Summer School on Deep Learning in NLP*, RANLP 2024, Bulgaria. [see](#)  
2022: *2nd Advanced NLP School*, Université Grenoble Alpes, France. [see](#)  
2021: *4th Advanced School in Big Data Analysis*, ICMC-USP, Brazil. [see](#)  
2020: *10th Lisbon Machine Learning School*, INESC, Portugal. [see](#)  
2019: *Introduction on the Stars - Astrophysics*, IFSC-USP. [see](#)  
2016: *The R language with an emphasis on probability*, ICMC-USP. [see](#)  
2015: *4th Summer School in Computer Science*, DCC-UFMG, Brazil. [see](#)  
2014: *Software Engineering Specialization*, PUC Minas. [see](#)

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**Context-Aware and Expert Data Resources for Brazilian Portuguese Hate Speech Detection**

Francielle Vargas, Isabelle Carvalho, Thiago Pardo, Fabrício Benevenuto  
Natural Language Engineering Journal. [see](#)

**Discourse Annotation Guideline for Low-Resource Languages**

Vargas, F., Schmeisser-Nieto, W., Rabinovich, Z., Benevenuto, F., Pardo, T.A.S.  
Natural Language Engineering Journal. [see](#)

**HausaHate: An Expert Annotated Corpus for Hausa Hate Speech Detection**

Vargas, F., Guimarães, S., Alves, D., Muhammad, H. S., Abdulmumin, I., Ahmad, I. S.,  
Mohamed, D., Pardo, T.A.S., Benevenuto, F.  
Proceedings of the 8th Workshop on Online Abuse and Harms (WOAH @ NAACL 2024).  
[see](#)

**Extended Multimodal Hate Speech Event Detection During Russia-Ukraine Crisis**

Thapa, S, Rauniyar, K., Jafri, F. A., Veeramani, H., Jain, R., Jain, S., Vargas, F., Hürriyetoğlu,  
A., Naseem, U.  
Workshop Proceedings of the 14th Recent Advances in Natural Language Processing (CASE  
@ RANLP 2024). [see](#)

## 2023

**Predicting Sentence-Level Factuality of News and Bias of Media Outlets**

Vargas, F., Jaidka, K., Pardo, T.A.S., Benevenuto, F.  
Recent Advances in Natural Language Processing (RANLP). [see](#)

**Socially Responsible Hate Speech Detection: Can Classifiers Reflect Social Stereotypes?**

Vargas, F., Carvalho, I., Hürriyetoğlu, A., Pardo, T.A.S., Benevenuto, F.  
Recent Advances in Natural Language Processing (RANLP). [see](#)

**NoHateBrazil: A Brazilian Portuguese Text Offensiveness Analysis System**

Vargas, F., Carvalho, I., Schmeisser-Nieto, W., Benevenuto, F., Pardo, T.A.S.  
Recent Advances in Natural Language Processing (RANLP). [see](#)

**Multimodal Hate Speech Detection**

Thapa, S., Jafr, F. A., Hürriyetoğlu, A., Vargas, F., Lee, R. K., Naseem, U.  
Workshop Proceedings of the 17th Conference of the European Chapter of the Association  
for Computational Linguistics (CASE @ EACL 2023). [see](#)

## 2022

**HateBR: A Large Expert Annotated Corpus of Brazilian Instagram Comments for Abusive Language Detection**

Vargas, F., Carvalho, I., Góes, F.R., Pardo, T.A.S., Benevenuto, F.  
13th Conference on Language Resources and Evaluation (LREC). [see](#)

**Rhetorical Structure Approach for Online Deception Detection: A Survey**

Vargas, F., D'Alessandro, J., Rabinovich, Z., Benevenuto, F., Pardo, T.A.S.  
13th Conference on Language Resources and Evaluation (LREC). pp.5906-5915.

**Studying Dishonest Intentions in Brazilian Portuguese Texts**

Vargas, F., Pardo, T.A.S.  
Deceptive AI. Springer: Communications in Computer and Information Science. [see](#)

### **Extended Multilingual Protest News Detection**

Hurriyetoglu, A., Mutlu, O., San, F. D., Uca, O., Gurel, A. S., Radford, B., Dai, Y., Hettiarachchi, H., Stoeck, N., Nomoto, T., Slavcheva, M., Vargas, F., Javid, A., Beyhan, F., Yoruk, E.

Workshop Proceedings of the 2022 Conference on Empirical Methods in Natural Language Processing (CASE @ EMNLP 2022). [see](#)

## **2021**

### **Contextual-Lexicon Approach for Abusive Language Detection**

Vargas, F., Góes, F.R., Carvalho, I., Pardo, T.A.S., Benevenuto, F.

Recent Advances in Natural Language Processing (RANLP). [see](#)

### **Towards Discourse-Aware Models for Multilingual Fake News Detection**

Vargas, F., Benevenuto, F., Pardo, T.A.S.

Recent Advances in Natural Language Processing (RANLP). [see](#)

### **Implicit Opinion Aspect Clues in Portuguese Texts: Analysis and Categorization**

Machado, M. T., Pardo, T.A.S., Ruiz, E. E. S., Di Felippo, A., Vargas, F.

15th International Conference on the Computational Processing of Portuguese (PROPOR).

[see](#)

## **2020 and before**

### **Linguistic Rules for Fine-Grained Opinion Extraction**

Vargas, F., Pardo, T.A.S.

Workshop Proceedings of the 14th International AAAI Conference on Web and Social Media (SocialSens @ ICWSM 2020). [see](#)

### **Identifying Fine-Grained Opinion and Classifying Polarity on Coronavirus Pandemic**

Vargas, F., Santos, R.S.S., F., Rocha, P.R.

9th Brazilian Conference on Intelligent Systems (BRACIS 2020). [see](#)

### **Aspect Clustering Methods for Sentiment Analysis**

Vargas, F., Pardo, T.A.S.

13th International Conference on the Computational Processing of Portuguese (PROPOR 2018). [see](#)

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<b>Data Resources</b>	<a href="#">HateBR</a> : A Benchmark Expert Hate Speech Dataset of Brazilian Instagram comments <a href="#">FactNews</a> : A Benchmark Dataset for Sentence-Level Factuality and Media Bias Prediction <a href="#">HausaHate</a> : A Benchmark Expert Dataset for Hausa Hate Speech Detection <a href="#">OPCovidBR</a> : A Dataset of Covid-19 Tweets For Aspect-Based Sentiment Analysis <a href="#">AspectPRO</a> : A Dataset of Consumer Reviews for Aspect-Based Sentiment Analysis <a href="#">PRO</a> : A Set of Taxonomies for Aspect-Based Sentiment Analysis <a href="#">MOL</a> : A Context-Aware Multilingual Offensive Lexicon
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<b>Automated Methods</b>	<a href="#">B+M</a> : An Optimized Bag-of-Words Model by Contextual Lexicon Attention for Explainable Hate Speech Detection <a href="#">SSA</a> : A Post-hoc Explanation Countermeasure to Assess Social Bias in HS Classifiers <a href="#">FACTual</a> : Sentence-Level News Source Reliability Estimation
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<b>Computer Programs</b>	<a href="#">OPCluster-PT</a> : A System for Extraction and Clustering of Fine-Grained Opinions <a href="#">NoHateBrazil</a> : A Brazilian Portuguese Text Offensiveness Analysis System
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<b>Invited Speaker</b>	<p>2024: [Invited Researcher] <a href="#">MOLA - Language &amp; Morality Lab</a>  <b>University of Southern California (USC)</b>. Los Angeles, California  Title: <i>Fighting Misinformation and Polarization: Socially Responsible and Explainable Language Technologies for Fact-Checking and Hate Speech Detection</i>. <a href="#">see</a></p> <p>2024: [Keynote Speaker] <a href="#">Conference cum Conclave on Emerging trends in Journalistic and Media Practices</a>  <b>DG Vaishnav College (DDGDV)</b>. Chennai, India  Title: <i>Predicting Sentence-Level News Source Reliability for Fact-Checking</i>. <a href="#">see</a></p> <p>2023: [Invited Speaker] <a href="#">Conference on Harmful Online Communication</a>  <b>Leibniz Institute for the Social Sciences (GESIS)</b>, Cologne, Germany  Title: <i>Countering Harmful Online Communication in Brazil: Predicting Fine-Grained Factuality of News and Offensive Context of Social Media Comment</i>. <a href="#">see</a></p>
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<b>Organizing and Program Committee</b>	<p><b>Organizing Committee</b></p> <ol style="list-style-type: none"> <li>1. Data(set) Co-chair. <i>ICWSM 2023</i>. <a href="#">see</a></li> <li>2. Accessibility Chair. <i>ICWSM 2022</i>. <a href="#">see</a></li> <li>3. Diversity, Equity, and Inclusion Chair. <i>ICWSM 2021</i>. <a href="#">see</a></li> <li>4. Steering Committee. 6th CASE@<i>RANLP 2023</i>. <a href="#">see</a></li> <li>5. Steering Committee. 5th CASE@<i>EMNLP 2022</i>. <a href="#">see</a></li> </ol>
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**Program Committee**

- *EMNLP* ([2022](#)) ([2023](#)) ([2024](#))
- *NAACL* ([2022](#)) ([2024](#))
- *ACL* ([2023](#))
- *LREC* ([2024](#))
- *COLING* ([2025](#))

- *ICWSM* (2025)
- *CIKM* (2024)(2023)
- *HICSS*(2023)
- *WOAH* (NAACL-HLT 2022) (ACL 2023) (NAACL 2024)
- *FEVER* (EACL 2023) (EMLP 2024)
- *CODI* (COLING 2022) (ACL 2023) (EACL 2024)
- *ARGMINING-CMNA* (COMMA 2022) (COLING 2022) (ICLP 2023)
- *SoCal NLP* (2022)

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<b>Conference Participation</b>	EMNLP 2024. to appear NAACL 2024. <a href="#">see</a> RANLP 2023. <a href="#">see</a> ACL 2023. <a href="#">see</a> LREC 2022. <a href="#">see</a> RANLP 2021. <a href="#">see</a> ICWSM 2021. <a href="#">see</a> ACL 2020. <a href="#">see</a> EMNLP 2020. <a href="#">see</a> LREC 2020. <a href="#">see</a> BRACIS 2020. <a href="#">see</a>
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<b>Adviser</b>	<b>CS Undergraduate:</b> Lucas Sobral Fontes Cardoso, University of São Paulo, 2020. <b>Thesis:</b> <i>Web resources for an aspect identification and clustering tool in fine-grained opinion mining.</i> <a href="#">see</a>
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<b>Recommendation Letters</b>	Fabricao Benevenuto. <i>DCC-UFMG</i> . <a href="#">letter</a> Norah Abokhodair. <i>Microsoft Research</i> . <a href="#">letter</a> Roseli Romero. <i>ICMC-USP</i> . <a href="#">letter</a> Carlos Ramisch. <i>LIS-CNRS-Aix Marseille Université</i> . <a href="#">letter</a>
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<b>Coding</b>	Python, NLTK, spaCy, Gensim, Keras, Tensorflow, PyTorch, SQL, RDF(s), OWL, Unix.
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<b>Language</b>	<b>Portuguese:</b> Native. <b>English:</b> Advance.
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<b>Awards &amp; Honors</b>	Google Latin America Research Awards (LARA 2024). NAACL Diversity & Inclusion Award (NAACL 2024). Outstanding Academic Project and Honorable Mention (UFMG 2013). <a href="#">see</a> Outstanding Academic Project and Honorable Mention (UFMG 2012). <a href="#">see</a> <a href="#">see</a>
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