

## Francielle Vargas, MSc and PhD in Natural Language Processing

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

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<b>Main Skills</b>	Natural Language Processing Machine Learning Responsible AI / Explainability and Interpretability and Fairness
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<b>Education</b>	<i>PhD, Computer Science and Computational Mathematics</i> University of São Paulo Thesis: <i>Socially Responsible and Explainable Automated Fact-Checking and Hate Speech Detection.</i> <a href="#">see</a> Artificial Intelligence, Machine Learning and Natural Language Processing 2019 - 2024  <i>MSc, Computer Science and Computational Mathematics</i> University of São Paulo Thesis: <i>Semantic Clustering of Aspects for Opinion Mining.</i> <a href="#">see</a> Artificial Intelligence and Natural Language Processing 2015 - 2017  <i>BA, Linguistics</i> Federal University of Minas Gerais 2010 - 2014  <i>BS, Information Systems</i> The Pontifical Catholic University of Minas Gerais 2006 - 2009*
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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 and UFMG 2012)
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<b>Recommendation Letters</b>	Norah Abokhodair. <i>Microsoft Research.</i> <a href="#">letter</a> Ameeta Agrawal. <i>Portland State University, USA.</i> <a href="#">letter</a> Carlos Ramisch. <i>LIS-CNRS-Aix Marseille Université, France.</i> <a href="#">letter</a> Fabricio Benevenuto. <i>Federal University of Minas Gerais, Brazil.</i> <a href="#">letter</a>
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<b>Short Courses</b>	2024: <i>2nd Mexican NLP Summer School</i> , NAACL 2024, Mexico. <a href="#">see</a> 2023: <i>2nd Summer School on Deep Learning in NLP</i> , RANLP 2024, Bulgaria. <a href="#">see</a> 2022: <i>2nd Advanced NLP School</i> , Université Grenoble Alpes, France. <a href="#">see</a> 2021: <i>4th Advanced School in Big Data Analysis</i> , ICMC-USP, Brazil. <a href="#">see</a> 2020: <i>10th Lisbon Machine Learning School</i> , INESC, Portugal. <a href="#">see</a> 2015: <i>4th Summer School in Computer Science</i> , Federal University of Minas Gerais, BR. <a href="#">see</a> 2014: <i>Software Engineering (MBA)</i> , Pontifical Catholic University of Minas Gerais, BR. <a href="#">see</a>
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**MFTCXplain: A Benchmark Dataset for Explainable Moral Sentiment Detection**

Francielle Vargas, Diego Alves, Jackson Trager, Matteo Guida, Morteza Dehghan.  
*under review*

**HateBRXplain: A Benchmark Dataset with Human-Annotated Rationales for Explainable Hate Speech Detection in Brazilian Portuguese**

Isadora Salles, Francielle Vargas, Fabrício Benevenuto.  
*under review*

**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**

Francielle Vargas, Wolfgang Schmeisser-Nieto, Zohar Rabinovich, Thiago A.S. Pardo, Fabrício Benevenuto.  
*Natural Language Engineering Journal*. [see](#)

**Improving Explainable Fact-Checking via Sentence-Level Factual Reasoning**

Francielle Vargas, Isadora Salles, Diego Alves, Ameeta Agrawal, Thiago Pardo, Fabrício Benevenuto.  
*7th Fact Extraction and VERification Workshop (FEVER @ EMNLP 2024)*. [see](#)

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

Francielle Vargas, Samuel Guimarães, Shamsuddeen H. Muhammad, Diego Alves, Ibrahim Said Ahmad, Idris Abdulmumin, Diallo Mohamed, Thiago Pardo, Fabrício Benevenuto.  
*8th Workshop on Online Abuse and Harms (WOAH @ NAACL 2024)*. [see](#)

**Extended Multimodal Hate Speech Event Detection During Russia-Ukraine Crisis - Shared Task at CASE 2024**

Surendrabikram Thapa, Kritesh Rauniyar, Farhan Jafri, Hariram Veeramani, Raghav Jain, Sandesh Jain, Francielle Vargas, Ali Hürriyetoğlu, Usman Naseem.  
*Workshop Proceedings of the 14th Recent Advances in Natural Language Processing (CASE @ RANLP 2024)*. [see](#)

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

Francielle Vargas, Kokil Jaidka, Thiago A.S. Pardo, Fabrício Benevenuto.  
*Recent Advances in Natural Language Processing (RANLP 2023)*. [see](#)

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

Francielle Vargas, Isabelle Carvalho, Ali Hürriyetoğlu, Thiago A.S. Pardo, Fabrício Benevenuto.  
*Recent Advances in Natural Language Processing (RANLP 2023)*. [see](#)

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

Francielle Vargas, Isabelle Carvalho, Wolfgang Schmeisser-Nieto, Fabrício Benevenuto, Thiago A.S. Pardo.  
*Recent Advances in Natural Language Processing (RANLP 2023)*. [see](#)

### **Multimodal Hate Speech Event Detection - Shared Task 4, CASE 2023**

Surendrabikram Thapa, Farhan Jafr, Ali Hürriyetoglu, Francielle Vargas, Roy Ka-Wei Le, Usman Naseem.

*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**

Francielle Vargas, Isabelle Carvalho, Fabiana R. Góes, Thiago A.S. Pardo, Fabrício Benevenuto.

*13th Conference on Language Resources and Evaluation (LREC 2022)*. [see](#)

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

Francielle Vargas, Jonas D'Alessandro, Zohar Rabinovich, Fabrício Benevenuto, Thiago A.S. Pardo.

*13th Conference on Language Resources and Evaluation (LREC 2022)*. pp.5906-5915.

### **Studying Dishonest Intentions in Texts**

Francielle Vargas, Thiago A. S. Pardo.

*Deceptive AI*. Springer: Communications in Computer and Information Science. [see](#)

### **Extended Multilingual Protest News Detection - Shared Task 1, CASE 2021 and 2022**

Ali Hürriyetoglu, Osman Mutlu, Firat Duruşan, Onur Uca, Alaeddin Gürel, Benjamin J. Radford, Yaoyao Dai, Hansi Hettiarachchi, Niklas Stoeck, Tadashi Nomoto, Milena Slavcheva, Francielle Vargas, Aaqib Javid, Aaqib Javid, Erdem Yörük.

*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., Fabiana R. Góes, Isabelle Carvalho, Fabrício Benevenuto, Thiago A.S. Pardo.

*Recent Advances in Natural Language Processing (RANLP 2021)*. [see](#)

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

Francielle Vargas, Fabrício Benevenuto, Thiago A.S. Pardo.

*Recent Advances in Natural Language Processing (RANLP 2021)*. [see](#)

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

Mateus T. Machado, Thiago A. S. Pardo, Evandro E. S. Ruiz, Ariani Di Felippo, Francielle Vargas.

*15th International Conference on the Computational Processing of Portuguese (PROPOR 2021)*. [see](#)

### **Towards A Diverse, Inclusive, Accessible and Equitable AAAI International Conference on Web and Social Media (ICWSM)**

Jason R.C. Nurse, Francielle Vargas, Naemul Hassan, Dakuo Wang, Panagiotis Andriotis, Amira Ghenai, Kokil Jaidka, Eni Mustafaraj, Kenneth Joseph and Brooke Foucault Welles  
*Workshop Proceedings of the 15th International AAAI Conference on Web and Social Media (ICWSM 2021)*. pp. 01-12. Held Online. [see](#)

## **2020 and before**

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

Francielle Vargas, Thiago A. S. Pardo.

*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

Francielle Vargas, 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](#)

### The Coreference Annotation of the CSTNews Corpus

Thiago A. S. Pardo, Jorge Baptista, Magali S. Duran, Maria das Graças Nunes, Fernando Nóbrega, Sandra Aluísio, Ariani Di Felippo, Eloize Seno, Raphael R. Silva, Rafael Anchieta, Henrico Brum, Márcio Dias, Rafael Martins, Erick Maziero, Jackson Souza, Francielle Vargas

*2nd Workshop on Evaluation of Human Language Technologies for Iberian Languages (IberEval @ SEPLN 2017)*. pp. 102-112. Murcia, Spain. [see](#)

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<b>Experience</b>	2024-2024: <i>Google PhD Fellowship</i> , Federal University of Minas Gerais, Brazil 2024-2024: <i>Visiting Researcher</i> , University of Southern California, USA 2023-2023: <i>Invited Researcher</i> , Leibniz Institute for the Social Sciences, Germany 2021-2022: <i>Data Scientist</i> , Cisco Webex, USA 2015-2023: <i>Graduate Researcher</i> , University of São Paulo, Brazil 2014-2015: <i>System Analyst</i> , Unisys, Brazil 2010-2014: <i>Research Assistant</i> , Federal University of Minas Gerais, Brazil
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<b>Data Resources</b>	<a href="#">HateBRXplain</a> : A Benchmark Dataset with Human-Annotated Rationales for Explainable Hate Speech Detection <a href="#">MFTCXplain</a> : A Benchmark Dataset for Explainable Moral Sentiment Detection <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>Methods (patents)</b>	<a href="#">B+M</a> : Contextualized Bag-of-Words with Feature Saliency for Explainable HS Detection <a href="#">SSA</a> : A Counterfactual Explanation Measure to Assess Social Bias in Hate Speech Classifiers <a href="#">SELFAR</a> : Sentence-Level Factual Reasoning for Explainable Fact-Checking
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<b>Computer Programs</b>	<a href="#">FACTual</a> : A Fact-Checking and News Source Reliability Estimation System <a href="#">NoHateBrazil</a> : A Brazilian Portuguese Text Offensiveness Analysis System <a href="#">OPCluster-PT</a> : A System for Extraction and Clustering of Opinions
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<b>Coding</b>	Python, NLTK, spaCy, Gensim, Keras, Tensorflow, PyTorch, SQL, RDF(s), OWL, Unix.
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<b>Invited Speaker</b>	<p>2024: [Invited Researcher] <a href="#">Computational Social Science Lab</a>  <b>University of Southern California (USC)</b>. Los Angeles, California  Title: <i>Fighting Misinformation and Radicalism: Socially Responsible and Explainable 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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**Organizing and Program Committee**

**Organizing Committee**

1. Co-organizer. *WOAH 2015*. [see](#)
2. Data(set) Co-chair. *ICWSM 2023*. [see](#)
3. Accessibility Chair. *ICWSM 2022*. [see](#)
4. Diversity, Equity, and Inclusion Chair. *ICWSM 2021*. [see](#)
5. Co-organizer. 6th *CASE@RANLP 2023*. [see](#)
6. Co-organizer. 5th *CASE@EMNLP 2022*. [see](#)

**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>	<a href="#">ACL 2020</a> , <a href="#">ACL 2023</a> , <a href="#">EMNLP 2020</a> , <a href="#">EMNLP 2024</a> , <a href="#">LREC 2020</a> , <a href="#">LREC 2022</a> , <a href="#">RANLP 2021</a> , <a href="#">RANLP 2023</a> , <a href="#">NAACL 2024</a> , <a href="#">ICWSM 2021</a> , <a href="#">BRACIS 2020</a> .
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<b>Adviser</b>	<p><b>CS Undergraduate:</b> Lucas Sobral Fontes Cardoso, University of São Paulo, 2020.</p> <p><b>Thesis:</b> <i>Web resources for an aspect identification and clustering tool in fine-grained opinion mining</i>. <a href="#">see</a></p>
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<b>Language</b>	<b>English:</b> Advance.
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