# Francielle Vargas

# PhD in Computer Science - Natural Language Processing

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Natural Language Processing, Societal Computing, Machine Learning Responsible AI: Explainability and Interpretability, and Fairness.

## Education

PhD, Computer Science and Computational Mathematics

University of São Paulo

Socially Responsible and Explainable Autom. Fact-Checking and Hate Speech Detection. see

Advisors: Thiago A. S. Pardo and Fabrício Benevenuto

2019 - 2024

MSc, Computer Science and Computational Mathematics

University of São Paulo

Semantic Clustering of Aspects for Opinion Mining. see

Advisor: Thiago A. S. Pardo

2015 - 2017

BA, Linguistics

Federal University of Minas Gerais

2010 - 2014

BS, Information Systems

Pontifical Catholic University of Minas Gerais

2006 - 2009

## Awards & Honors

Google Latin America Research Awards (LARA 2024)

Diversity and Inclusion Grant Award (EMNLP 2024) Diversity and Inclusion Grant Award (NAACL 2024)

Outstanding Academic Project and Honorable Mention (UFMG 2013)

Outstanding Academic Project and Honorable Mention (UFMG 2012)

## **Invited Speaker**

2024: [Invited Researcher] Computational Social Science - Language and Morality Lab

University of Southern California (USC). Los Angeles, California

Title: Fighting Misinformation and Radicalism: Socially Responsible and Explainable Fact-

Checking and Hate Speech Detection. see

2024: [Keynote Speaker] Conference cum Conclave on Emerging trends in Journalistic and

Media Practices

DG Vaishnav College (DDGDV). Chennai, India

Title: Predicting Sentence-Level News Source Reliability for Fact-Checking. see

2023: [Invited Speaker] Conference on Harmful Online Communication

Leibniz Institute for the Social Sciences (GESIS), Cologne, Germany

Title: Countering Harmful Online Communication in Brazil: Predicting Fine-Grained Fac-

tuality of News and Offensive Context of Social Media Comment. see

#### Experience

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2024-2024: Google PhD Fellowship, Federal University of Minas Gerais, Brazil
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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

#### **Short Curses**

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2024: 2nd Mexican NLP Summer School, NAACL 2024, Mexico. see
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2023: 2nd Summer School on Deep Learning in NLP, RANLP 2024, Bulgaria. see

2022: 2nd Advanced NLP School, Université Grenoble Alpes, France. see

2022: IEEE Spoken Language Technology Workshop Hackathon, Qatar. see

2021: 4th Advanced School in Big Data Analysis, ICMC-USP, Brazil. see

2020: 10th Lisbon Machine Learning School, INESC, Portugal. see

2020:1st Datathon-Hackathon Antisemitism on Social Media, Indiana University, USA. see

2019: Introduction on the Stars - Astrophysics, University of São Paulo, Brazil. see

2016: The R language with an emphasis on probability, University of São Paulo, Brazil. see

2015: 4th Summer School in Computer Science, Federal University of Minas Gerais, BR. see

2014: Software Engineering (MBA), Pontifical Catholic University of Minas Gerais, BR. see

# Organizing & 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)

#### Publications 2025

Isadora Salles, <u>Francielle Vargas</u>, Fabrício Benevenuto (2025) **HateBRXplain: A Benchmark Dataset** with Human-Annotated Rationales for Explainable Hate Speech **Detection in Brazilian Portuguese**. 31st International Conference on Computational Linguistics (COLING 2025). pp. 1-12, Abu Dhabi, UAE. to appear

Francielle Vargas, Wolfgang Schmeisser-Nieto, Zohar Rabinovich, Thiago A.S. Pardo, Fabrício Benevenuto (2025) **Discourse Annotation Guideline for Low-Resource Languages**. *Natural Language Engineering Journal*. Cambridge University Press. to appear.

### 2024

Francielle Vargas, Isabelle Carvalho, Thiago Pardo, Fabrício Benevenuto (2024) Context-Aware and Expert Data Resources for Brazilian Portuguese Hate Speech Detection. Natural Language Engineering Journal. pp. 1-22. Cambridge University Press. see

Francielle Vargas, Isadora Salles, Diego Alves, Ameeta Agrawal, Thiago Pardo, Fabrício Benevenuto (2024) Improving Explainable Fact-Checking via Sentence-Level Factual Reasoning. 7th Fact Extraction and VERification Workshop (FEVER @ EMNLP 2024). pp. 192–204, Miami, United States see

Francielle Vargas, Samuel Guimarães, Shamsuddeen H. Muhammad, Diego Alves, Ibrahim Said Ahmad, Idris Abdulmumin, Diallo Mohamed, Thiago Pardo, Fabrício Benevenuto (2024) HausaHate: An Expert Annotated Corpus for Hausa Hate Speech Detection. 8th Workshop on Online Abuse and Harms (WOAH @ NAACL 2024). pp. 52–58. Mexico City, Mexico. see

Surendrabikram Thapa, Kritesh Rauniyar, Farhan Jafri, Hariram Veeramani, Raghav Jain, Sandesh Jain, Francielle Vargas, Ali Hürriyetoğlu, Usman Naseem (2024) Extended Multimodal Hate Speech Event Detection During Russia-Ukraine Crisis - Shared Task at CASE 2024. Workshop Proceedings of the 14th Recent Advances in Natural Language Processing (CASE @ RANLP 2024). pp. 221–228. St. Julians, Malta. see

#### 2023

Francielle Vargas, Isabelle Carvalho, Ali Hürriyetoğlu, Thiago A.S. Pardo, Fabrício Benevenuto (2023) Socially Responsible Hate Speech Detection: Can Classifiers Reflect Social Stereotypes?. Recent Advances in Natural Language Processing (RANLP 2023). pp. 1187–1196. Varna, Bulgaria. see

Francielle Vargas, Kokil Jaidka, Thiago A.S. Pardo, Fabrício Benevenuto (2023) **Predicting Sentence-Level Factuality of News and Bias of Media Outlets**. *Recent Advances in Natural Language Processing (RANLP 2023)*. pp. 1197–1206. Varna, Bulgaria. see

Francielle Vargas, Isabelle Carvalho, Wolfgang Schmeisser-Nieto, Fabrício Benevenuto, Thiago A.S. Pardo. NoHateBrazil: A Brazilian Portuguese Text Offensiveness Analysis System. Recent Advances in Natural Language Processing (RANLP 2023). pp.1180–1186. Varna, Bulgaria. see

Surendrabikram Thapa, Farhan Jafr, Ali Hürriyetoğlu, Francielle Vargas, Roy Ka-Wei Le, Usman Naseem. **Multimodal Hate Speech Event Detection - Shared Task 4, CASE 2023**. Workshop Proceedings of the 17th Conference of the European Chapter of the Association for Computational Linguistics (CASE @ EACL 2023). pp.151-159. Varna, Bulgaria. see

## 2022

Francielle Vargas, Isabelle Carvalho, Fabiana R. Góes, Thiago A.S. Pardo, Fabrício Benevenuto (2022) HateBR: A Large Expert Annotated Corpus of Brazilian Instagram Comments for Abusive Language Detection. 13th Conference on Language Resources and Evaluation (LREC 2022). pp. 7174–7183. Marseille, France. see

Francielle Vargas, Jonas D'Alessandro, Zohar Rabinovich, Fabrício Benevenuto, Thiago A.S. Pardo. (2022) Rhetorical Structure Approach for Online Deception Detection: A Survey. 13th Conference on Language Resources and Evaluation (LREC 2022). pp. 5906-5915. Marseille, France.

Francielle Vargas, Thiago A. S. Pardo (2022) Studying Dishonest Intentions in Brazilian Portuguese Texts. *Deceptive AI*. Springer: Communications in Computer and Information Science. vol 1296. pp. 166–178. see

Ali Hürriyetoğlu, Osman Mutlu, Fırat Duruşan, Onur Uca, Alaeddin Gürel, Benjamin J. Radford, Yaoyao Dai, Hansi Hettiarachchi, Niklas Stoehr, Tadashi Nomoto, Milena Slavcheva, Francielle Vargas, Aaqib Javid, Aaqib Javid, Erdem Yörük (2022) Extended Multilingual Protest News Detection - Shared Task 1, CASE 2021 and 2022. Workshop Proceedings of the 2022 Conference on Empirical Methods in Natural Language Processing (CASE @ EMNLP 2022). pp. 223–228. Abu Dhabi, Arab Emirates. see

## 2021

Francielle Vargas, Fabiana R. Góes, Isabelle Carvalho, Fabrício Benevenuto, Thiago A.S. Pardo (2021) Contextual-Lexicon Approach for Abusive Language Detection. Recent Advances in Natural Language Processing (RANLP 2021). pp. 1442-1451. Held Online. see

Francielle Vargas, Fabrício Benevenuto, Thiago A.S. Pardo (2021) **Towards Discourse- Aware Models for Multilingual Fake News Detection**. Recent Advances in Natural Language Processing (RANLP 2021). pp. 210-218. Held Online. see

Mateus T. Machado, Thiago A. S. Pardo, Evandro E. S. Ruiz, Ariani Di Felippo, Francielle Vargas (2021) Implicit Opinion Aspect Clues in Portuguese Texts: Analysis and Categorization. 15th International Conference on the Computational Processing of Portuguese (PROPOR 2021). pp. 68-78. Fortaleza, Brazil. see

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

#### 2020 and before

Francielle Vargas, Thiago A. S. Pardo (2020). Linguistic Rules for Fine-Grained Opinion Extraction. Workshop Proceedings of the 14th International AAAI Conference on Web and Social Media (SocialSens @ ICWSM 2020). pp. 1-6. Held Online. see

Francielle Vargas, Rodolfo Sanches Saraiva Dos Santos, Pedro Regattieri Rocha (2020) Identifying Fine-Grained Opinion and Classifying Polarity on Coronavirus Pandemic. 9th Brazilian Conference on Intelligent Systems (BRACIS 2020). pp. 511-520. Rio Grande, Brazil. see

Francielle Vargas, Thiago A. S. Pardo (2018). Aspect Clustering Methods for Sentiment Analysis. 13th International Conference on the Computational Processing of Portuguese (PROPOR 2018). pp.365-374. Canela, Brazil. see

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 (2017) **The Coreference Annotation of the CSTNews Corpus**. 2nd Workshop on Evaluation of Human Language Technologies for Iberian Languages (IberEval @ SEPLN 2017). pp. 102-112. Murcia, Spain. see