# Francielle Vargas

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#### Education

PhD, Computer Science and Computational Mathematics

University of São Paulo Advisor: Thiago A. S. Pardo Co-Adivisor: Fabrício Benevenuto

August 2019 - current

MSc, Computer Science and Computational Mathematics

University of São Paulo

Thesis: Semantic clustering of aspects for opinion mining pdf

Advisor: Thiago A. S. Pardo August 2015 - November 2017

BA, Linguistics

Federal University of Minas Gerais

August 2010 - June 2014

BSc, Information Systems

Pontifical Catholic University of Minas Gerais

August 2006 - December 2009

## Research Groups

LOCUS - Social Computing Lab, 2021/2023

Computer Science Department, Federal University of Minas Gerais, Brazil.

NILC - Interinstitutional Center for Computational Linguistics, 2015/2023

Institute of Mathematical and Computer Sciences, University of São Paulo, Brazil.

## Organizing and Program Committee

## Program Committee

- 1. Discourse and Pragmatics Track. In The 2022 Conference on Empirical Methods in Natural Language Processing (EMNLP 2022). see
- 2. Resources and Evaluation Track. In The 2022 Conference on Empirical Methods in Natural Language Processing (EMNLP 2022). see
- 3. NLP Applications Track. In The 2022 Conference on Empirical Methods in Natural Language Processing (EMNLP 2022). see
- 4. Sentiment Analysis, Stylistic Analysis, and Argument Mining Track. In The 2022 Conference on Empirical Methods in Natural Language Processing (EMNLP 2022). see
- 5. Computational Social Science and Cultural Analytics Track. In The 2022 Conference on Empirical Methods in Natural Language Processing (EMNLP 2022).
- 6. **3rd Workshop on Computational Approaches to Discourse**. In 29th International Conference on Computational Linguistics (COLING 2022). see
- 7. 9th Workshop on Argument Mining. In 29th International Conference on Computational Linguistics (COLING 2022). see

- 8. 6th Workshop on Online Abuse and Harms. In The 2022 Conference of the North American Chapter of the Association for Computational Linguistics Human Language Technologies (NAACL-HLT 2022). see
- 9. The NAACL Student Research Workshop. In The 2022 Conference of the North American Chapter of the Association for Computational Linguistics Human Language Technologies (NAACL-HLT 2022). see
- 10. **22th Workshop on Computational Models of Natural Argument.**In 9th International Conference on Computational Models of Argument (COMMA 2022). to appear
- 11. 1st Workshop on Argumentation & Machine Learning. In 9th International Conference on Computational Models of Argument (COMMA 2022). see
- 12. 5th International Workshop Challenges and Applications of Automated Extraction of Socio-political Events from Text. In 2022 Empirical Methods in Natural Language Processing (EMNLP 2022). see
- 13. 4th International Workshop Challenges and Applications of Automated Extraction of Socio-political Events from Text. In 59th Annual Meeting of the Association for Computational Linguistics and 11th International Joint Conference on Natural Language Processing (ACL-IJCNLP 2021). see

## Organizing Committee

- Committee Member. 5th International Workshop Challenges and Applications of Automated Extraction of Socio-political Events from Text. In The 2022 Empirical Methods in Natural Language Processing (EMNLP 2022). see
- 2. Accessibility Chair. 16th International Conference on Web and Social Media (ICWSM'22). see
- 3. Diversity, Equity, and Inclusion Chair. 15th International AAAI Conference on Web and Social Media (ICWSM'21). see

#### Publications Journals

Vargas, F.A., Pardo, T.A.S., Benevenuto, F., Schmeisser, W., Zaczynska, Z., Rabinovich, Z. (2022). Discourse-annotation guideline using rhetorical structure theory: multilingual examples. *Dialogue & Discourse Journal*, pp. 1-63. submitted

Vargas, F.A., Carvalho, I., Góes, F.R., Pardo, T.A.S and Benevenuto, F. (2022). An expert annotated corpus and a contextual-aware offensive lexicon for Brazilian hate speech detection. *Natural Language Engineering Journal*, pp. 1-22. accepted/to appear

## Conferences

Vargas, F.A., D'Alessandro, J., Rabinovich, Z., Benevenuto, F., Pardo, T.A.S (2022). Rhetorical structure approach online deception detection: A survey. 13th Conference on Language Resources and Evaluation (LREC), pp. 5906-5915. Marseille, France. pdf

Vargas, F.A., Carvalho, I., Góes, F.R., Pardo, T.A.S and Benevenuto, F. (2022). HateBR: A expert annotated corpus of Brazilian Instagram comments for offensive language and hate speech detection. 13th Conference on Language Resources and Evaluation (LREC), pp. 7174–7183. Marseille, France. pdf

Machado, M., Pardo, T.A.S., Ruiz, E. E. S., Di Felippo, A., Vargas, F.A. (2022). Implicit aspect clues in Portuguese texts: analysis and categorization. *15th International Conference on Computational Processing of Portuguese (PROPOR)*, pp. 68–78. Fortaleza, Brazil. pdf

- Vargas, F.A. Benevenuto, F., Pardo, T.A.S (2021). Toward discourse-aware models for multilingual fake news detection. *International Conference Recent Advances in Natural Language Processing (RANLP)*, pp. 210-218. Held Online. pdf
- Vargas, F.A., Góes, F.R., Carvalho, I., Benevenuto, F. and Pardo, T.A.S. (2021). Contextual-lexicon approach for abusive language detection. *International Conference Recent Advances in Natural Language Processing Deep Learning for Natural Language Processing Methods and Applications (RANLP)*, pp. 1442-1451. Held Online. pdf
- Vargas, F.A., Santos, R. R. S and Rocha, P. R. (2020) Identifying fine-grained opinion and classifying polarity on coronavirus pandemic. *9th Brazilian Conference on Intelligent Systems (BRACIS)*, pp. 511-520. Rio Grande, Brazil. pdf
- Vargas, F.A. and Pardo, T.A.S. (2018). Aspect clustering methods for sentiment analysis. 13th International Conference on Computational Processing of Portuguese (PROPOR), pp. 365-374. Canela, Brazil. pdf
- Vargas, F.A. and Pardo, T.A.S. (2017). Hierarchical clustering of aspects for opinion mining: a corpus study. 9th Escola Brasileira de Linguística Computacional (EBRALC), pp. 69-84. São Leopoldo, Brazil. pdf

#### Workshops

- Nurse, J. R., Vargas, F. A., Hassan, N, Wang, D., Andriotis, P., Ghenai, A., Jaidka, K., Mustafaraj, E., Joseph, K., Welles, B. F. (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), pages 1-14. Held Online. pdf
- Vargas, F.A. and Pardo, T.A.S (2020). Linguistic rules for fine-grained opinion extraction. Workshop Proceedings of the 14th International AAAI Conference on Web and Social Media (ICWSM), pp. 1-6. Held Online. pdf
- Vargas, F.A., Pardo, T.A.S. (2020) Studying dishonest intentions in texts. *st International Workshop on Deceptive AI*. In Communications in Computer and Information Science book series (CCIS,volume 1296). pp. 166-178. Held Online. pdf
- Pardo, T.A.S., Baptista, J., Duran, M.S., Nunes, M.G.V., Nóbrega, F.A.A., Aluísio, S.M., Di Felippo, A., Seno, E.R.M., Silva, R.R., Anchiêta, R.T., Brum, H.B., Dias, M.S., Martins, R.S.O., Maziero, E.G., Souza, J.W.C., **Vargas, F.A.** (2017). The coreference annotation of the CSTNews corpus. In the 2nd Workshop on Evaluation of Human Language Technologies for Iberian Languages. Workshop Proceedings of the 33th Conference of the Spanish Society for Natural Language Processing (SEPLN). 102-112. Murcia, Spain. pdf
- Cambraia, C. N., Vargas, F. A., Tavares, P. C., Santos, T. N. (2014) A arquitetura da repressão: as narrativas nos inquéritos policiais/militares. In *Anais do Encontro do grupo de estudos e trabalho em história e linguagem: política das narrativas*, III, pages 83-103, Belo Horizonte. Fafich/UFMG. pdf

#### Technical reports

Vargas, F.A. and Pardo, T.A.S. (2017). Empirical study on clustering and hierarchical organization of aspects for opinion mining. *Technical ICMC's Reports*, USP, no.418.48p. pdf

### Previous Positions

#### **Academic Positions**

2019/2021: Graduate Research Assistant - Dept. of Computer Science.

University of São Paulo. pdf

2021/2021:Graduate Teaching Assistant in Neural Networks and Deep Learning.

University of São Paulo. to appear

2020/2020:Graduate Teaching Assistant - Computing Theory and Compilers.

University of São Paulo. pdf

2016/2016: Graduate Teaching Assistant in Computer Seminars.

University of São Paulo. pdf.

2015/2017: Graduate Research Assistant - Dept. of Computer Science.

University of São Paulo. pdf

2011/2014: Undergraduate Research Assistant - Dept. of Linguistics.

Federal University of Minas Gerais. pdf

#### **Industry Positions**

2021/2022 Data Science Analyst.

CISCO via Telus International.

2018/2018 Language Engineer.

Amazon via Appen.

2014/2015: System Analyst.

Unisys Corporation.

2009/2010: System Analyst.

Grupo Barcelos.

# Conference participation

2022: 13th International Conference on Language Resources and Evaluation (LREC). pdf

2021: 16th Recent Advances in Natural Language Processing (RANLP). pdf

2021: 15th International AAAI Conference on Web and Social Media (ICWSM) . pdf  $\,$ 

2020: The 2022 Empirical Methods in Natural Language Processing (EMNLP). pdf

2020: 9th Brazilian Conference on Intelligent Systems (BRACIS). pdf

2020: 1st International Workshop Automated Extraction of Socio-Political Events from News. 12th International Conference on Language Resources and Evaluation (LREC). pdf

2017: 9th Brazilian School on Computational Linguistics (EBRALC). pdf

2013: 29th Congresso Latino Americano de Sociologia: Crisis e Emergencias Sociales en

America Latina. pdf

2013: 4th International Symposium on Letters and Linguistics, Uberlândia, Brazil. pdf

## Mentoring

2020: Computer Science Undergraduate Student, Lucas Sobral Fontes Cardoso: Title: Web resources for an aspect identification and clustering tool in fine-grained opinion mining.

University of São Paulo. certificate

### Awards received

2013: Best Undergraduate Student Award, Federal University of Minas Gerais. pdf

2013: Best Undergraduate Project Award, Federal University of Minas Gerais. pdf

2012: Best Undergraduate Student Award, Federal University of Minas Gerais. pdf

## Short Courses

2019: Introduction on the Stars - Astrophysics. certificate

# Hackathon, Datathon and Summer Schools

2nd Advanced Language Processing School, Université Grenoble Alpes, France, 2022.pdf 1st Datathon and Hackathon "Antisemitism on Social Media", Indiana University Bloom-

ington, NLP Lab, United States, 2020.pdf

10th Lisbon Machine Learning School, Portugal, 2020.pdf

4th Brazilian Advanced School in Big Data Analysis, University of São Paulo, 2020. pdf

22th Computer Science Summer School, University of Sao Paulo, 2019.pdf

4th Computer Science Summer School, Federal University of Minas Gerais, 2015. pdf

10th Linguistics Summer School, Federal University of Minas Gerais, 2011.pdf

## Participation in examination committees

2021: Computer Science Graduate Course. Unitersity of São Paulo. Vivian Vieira. Aprendendo sobre veracidade de informações: Desenvolvimento e avaliação de curso EAD que aplica método científico na análise de notícias. pdf

2021: Computer Science Graduate Course. Unitersity of São Paulo. Laudeir José Lopes de Oliveira. Explorando o pensamento computacional com aprendizado de máquina: Elaboração de um material didático para uma oficinaintrodutória. pdf

2021: Computer Science Undergraduate Course. Unitersity of São Paulo. Lucas Silva Loureiro. Sistema de Recomendação de Livros. pdf

2020: Computer Science Undergraduate Course. Unitersity of São Paulo. Luana Balador Belisario. Análise discursiva aplicada à mineração de opinião: classificação de subjetividade para a língua portuguesa. see

2020: Computer Science Undergraduate Course. Unitersity of São Paulo. Paulo André Pimenta Aragão. Revisão Sistemática da Literatura sobre Software Educativos para Ensino de Engenharia de Software. see

2020: Computer Science Undergraduate Course. Unitersity of São Paulo. Tarcisio Ladeia de Oliveira. Mapeamento de Ambientes Externos com o Uso de Drones. see

2020: Computer Science Undergraduate Course. Unitersity of São Paulo. Rafael Farias Pinho. Planejamento de rotas para VANTs com desvio de obstáculos e incertezas. see

2019: 27th USP International Symposium on Scientific and Technological Initiation. Member of the examination committee of the undergraduate projects. pdf

## Talks as an invited speaker

Natural Language Processing and Data Science, University Center Methodist Izabela Hendrix, 2018. pdf

Opinion Mining, University of Sao Paulo, 2016. pdf

Text and Media, Federal University of Minas Gerais, 2012. pdf

# **Productions**

Technical-Scientific OpCluster: Fine-grained opinion extraction and clustering tool. (tool) (web version)

OPCovidBR: Aspect-based sentiment analysis dataset of Covid-19 Tweets. (dataset) AspectPRO: Aspect-based annotated corpus of web consumer reviews. (dataset)

HateBR: Large-scale abusive language dataset of Brazilian Instagram comments. (dataset)

Deceiver: Multilingual discourse-annotated corpus of fake and truth news. (dataset)

**PRO**: Taxonomies for aspect-based sentiment analysis in Portuguese (lexicon)

MOL: Multilingual offensive lexicon (lexicon)

## Recommendation Letter

Prof. Dr. Carlos Ramisch. Laboratoire d'Informatique et Systèmes - LIS - UMR CNRS 7020 - Aix Marseille Université. letter

Dra. Norah Abokhodair. Microsoft Research. letter

Prof. Dr. Fabricio Benevenuto. Computer Science Department, Federal University of Minas Gerais. letter

#### Languages

Python, SQL, RDF(s), OWL, XML, JSON, Unix/Bash.