# Felipe **González-Pizarro**

Msc. in Computer Science · Bs. in Computer Science and Engineering

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## Education

### MSc. in Computer Science
The University of British Columbia

*Vancouver, Canada*
*September 2021 - Expected Summer 2023*

- Focus on Natural Language Processing, Multimodal Learning, and Information Visualization under the supervision of Dr. Giuseppe Carenini
- Relevant coursework: Multimodal Learning with Vision, Language, and Sound (532S), Discourse in NLP (532G), Commonsense Reasoning in NLP (CPSC 532V), Computational Linguistics (CPSC 503), Information Visualization (CPSC 547), Topics in Human-Computer Interaction (CPSC 554)
- Average grade 95%. Canadian GPA: 4.0/4.0

### MSc. in Computer Science
Universidad Técnica Federico Santa María

*Santiago, Chile*
*March 2018 - September 2021*

- Focus on Social computing using Natural Language Processing, Deep Learning and Data Visualization methods
- Average grade 91%. Canadian GPA: 4.0/4.0

### Bsc. in Computer Science and Engineering
Universidad Técnica Federico Santa María

*Santiago, Chile*
*March 2012 - February 2018*

- Focus on Software Engineering, Project Management and Information Retrieval
- Average grade 81%, Canadian GPA: 3.7/4.0, Passed subjects: 66/66. **Best Graduated Student, Rank: 1/32**
- Exchange program at Politecnico di Milano, Italy during February - August 2016. Attending master degree classes.

## Skills

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|---|---|
| **Natural Language Processing** | Building and training ML models for NLP tasks using NLTK, spaCy, Gensim, and HuggingFace. |
| **Multimodal Learning** | Deep learning for vision and language using Pytorch (e.g., VAEs, RNNs, GANs, Difussion models. |
| **Information Visualization** | Interactive visualizations with D3.js, Plotly, Seaborn, and Matplotlib using effective design principles. |
| **Human Computer Interaction** | Conducting user studies, prototyping, and designing effective interfaces. Statistical analysis with Python/R. |
| **Programming** | Python (Pandas, Numpy, Tensorflow, Django, Flask, FastAPI), Javascript (D3.js, JQuery), C/C++ |
| **Languages** | English (IELTS Overall Band Score: 7.0), Spanish (Native), Italian (Elementary proficiency) |

## Peer-reviewed articles

- **González-Pizarro, F.**, & Zannettou, S. Understanding and Detecting Hateful Content using Contrastive Learning (To Appear). In International Conference on Web and Social Media (ICWSM), 11 pages. [Acceptance rate: 20%]
- Li, R., **González-Pizarro, F.**, Xing, L., Murray G., & Carenini G, Diversity-Aware Coherence Loss for Improving Neural Topic Models (Submitted). Proceedings of the 61st Annual Meeting of the Association for Computational Linguistics (ACL), 10 pages. [Acceptance rate: 31.4%]
- **González-Pizarro, F.**, López C., Milios E., Paulovich F., & Mendoza M. TopicVisExplorer: An interactive visualization tool to refine and compare topic models (Submitted). In ACM Transactions on Interactive Intelligent Systems, 30 pages. [Impact factor: 2.47]
- **González-Pizarro, F.**, Figueroa, A., López, C., & Aragon, C. Regional Differences in Information Privacy Concerns After the Facebook-Cambridge Analytica Data Scandal. In Computer Supported Cooperative Work (CSCW): The Journal of Collaborative Computing and Work Practices, 45 pages. [Impact factor: 1.912]
- **González, F.**, López, C., Castro, C., & Vasquez A. (To appear). Inequalities in Computational Thinking among Incoming Students in a STEM Chilean University. IEEE Latin America Transactions Journal, 7 pages. [Impact factor: 1.10]
- **González, F.**, Figueroa, A., López, C., & Aragon, C. Information Privacy Opinions on Twitter: A Cross-Language Study. In Conference Companion Publication of the 2019 on Computer Supported Cooperative Work and Social Computing, CSCW '19, Austin, TX (2019), 4 pages.
- **González, F.**, Yu, Y., Figueroa, A., López, C., & Aragon, C. Global reactions to the Cambridge analytica scandal: A cross-language social media study. In Companion Proceedings of The 2019 World Wide Web Conference, WWW'19, San Francisco, CA (2019), 8 pages [Acceptance rate: 18%].
- **González, F.**, López, C., & Castro, C. Development of Computational Thinking in High School Students: A Case Study in Chile. In 2018 37th International Conference of the Chilean Computer Science Society IEEE, SCCC'18, Santiago, Chile (2018), 8 pages. **Best paper award**

# Selected Work Experience

### Teaching assistant
*Vancouver, Canada*

THE UNIVERSITY OF BRITISH COLUMBIA
*September 2021 - Present*

- Courses: Topics in Computer Science - Natural Language Processing (CPSC 436N); Advanced Methods for Human Computer Interaction (CPSC 444); Applied Machine Learning (CPSC 330); Basic Algorithms and Data Structures (CPSC 221).
- Graded assignments and exams, led discussion sections, held office hours for student support, prepared course materials, and provide student feedback.
- Supervisors: Giuseppe Carenini & Vered Shwartz (CPSC 436N); Izabelle Janzen (CPSC 444); Mehrdad Oveisi (CPSC 330); Cinda Heeren (CPSC 221).

### Visiting Scholar
*Saarbrücken, Germany*

MAX PLANCK INSTITUTE FOR INFORMATICS
*June 2021 - August 2021*

- Investigated whether large pre-trained models based on Contrastive Learning can assist in detecting hateful imagery.
- Devised a methodology to identify Antisemitic/Islamophobic textual phrases using Google's Perspective API and manual annotations. The CLIP model was used to identify hateful imagery based on the phrases.
- Made publicly available a dataset of 420 Antisemitic/Islamophobic phrases and 92K images that can assist researchers in further understanding Antisemitism/Islamophobia and developing more accurate hate speech detection models.
- Published 1 paper on a highly-ranked international computer science conference.
- Advisor: Prof. Savvas Zannettou

### Visiting Researcher
*Halifax, Canada*

DALHOUSIE UNIVERSITY
*January 2020 - December 2020*

- Developed TopicVisExplorer, a web-based interactive visualization tool that enables humans to refine and compare topic models of multiple corpora.
- Proposed a topic similarity metric to compare LDA-generated topics that support better human interpretation than current state-of-the-art metrics.
- Proposed a document-based topic splitting operation that supports human-in-the-loop modifications of topic modeling results.
- Conducted a user study of TopicVisExplorer to validate its usefulness for human interpretation and comparison of LDA-generated topics.
- Advisors: Prof. Evangelos E. Milios & Prof. Fernando Paulovich

### Research Assistant
*Santiago, Chile*

UNIVERSITY OF WASHINGTON - UNIVERSIDAD TÉCNICA FEDERICO SANTA MARÍA
*March 2018 - December 2019*

- Proposed a novel methodology for inter-language comparison of social media text that offers an alternative method to conduct studies on data privacy perspectives across speakers of different languages and provide a roadmap for future cross-cultural research.
- Collected and analyzed unstructured textual social media data related to information privacy. Inter-language differences found on privacy-related views expand current knowledge of information privacy perspectives.
- Published 2 conference papers on highly-ranked international computer science conferences.
- Advisors: Prof. Cecilia Aragon & Prof. Claudia López

# Paper Reviewer

*September 2018 - Present*

- International Conference on Web and Social Media (ICWSM)
- ACM Conference on Human Factors in Computing Systems (CHI)
- ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW): **1 Special Recognition for Outstanding Review**
- The Web Conference: International World Wide Web Conference (WWW)
- International Conference of the Chilean Computer Science Society (SCCC)

# Selected Honors & Awards

| Year | | Country |
|---|---|---|
| 2021 | **Computer Science Merit Scholarship**, The University of British Columbia (UBC). Outstanding Graduate Student applicant. CAD 20,000 for living expenses | *Canada* |
| 2020 | **Emerging Leaders in the Americas Program (ELAP)**, EduCanada Research Scholarship. Funding for research in Canada at Dalhousie University (Canada). USD 7,300 for travel and living costs | *Canada* |
| 2019 | **The Cornell, Maryland, Max Planck Pre-doctoral Research School (CMMRS 2019)** , Max Planck Institute for Software Systems (MPI-SWS). Got selected to attend to CMMRS 2019 to learn about cutting-edge research in computer science at the MPI-SWS, Germany. Travel and living costs are fully funded. | *Germany* |
| 2019 | **National MSc. Grant**, National Commission for Scientific and Technological Research (CONICYT). Top 7% Applicant. USD 9500 for tuition and living expenses. | *Chile* |
| 2016 | **Santander International Mobility Program**, Santander Bank. USD 5000 for travel and living expenses during an exchange experience at Politecnico di Milano, Milan, Italy. | *Italy* |