

Felipe González-Pizarro

MSC. COMPUTER SCIENCE · BS. IN COMPUTER SCIENCE AND ENGINEERING

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Education

MSc. in Computer Science

Vancouver, Canada

THE UNIVERSITY OF BRITISH COLUMBIA

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

Santiago, Chile

UNIVERSIDAD TÉCNICA FEDERICO SANTA MARÍA

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

Santiago, Chile

UNIVERSIDAD TÉCNICA FEDERICO SANTA MARÍA

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

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, Diffusion 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., Milius 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 Schwartz (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 Anti-semitism/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

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