Vladimir **Araujo Vásquez**

PhD Student in Computer Science

linkedin.com/in/vgaraujov vgaraujov.github.io
+56 998826217 vgaraujo@uc.cl
Santiago, Chile

I am an Electronics Engineer and Ph.D. student in Computer Science. My main research interest is Deep Learning for Natural Language Processing, specifically on how to extend current approaches with mechanisms inspired by human language processing. I firmly believe that the use of Artificial Intelligence will be a benefit for various aspects of society.

Education

Present – 2018 | **Ph.D. in Engineering Sciences, Pontificia Universidad Católica, Chile**
- Mention : Computer Science
- Research Title : Prediction and Integration for Natural Language Representation

2017 – 2015 | **M.Sc. in Electronics Engineering, Pontificia Universidad Javeriana, Colombia**
- Mention : Intelligent Robotics (Cum laude)
- Thesis Title : SiREM Robotic System to Train Working Memory

2015 – 2009 | **B.Eng. in Electronics Engineering, Universidad Politécnica Salesiana, Ecuador**
- Mention : Automation (Second best graduate)
- Thesis Title : Controlling a humanoid robot in 3D space using the kinect sensor

Projects

Explainable Artificial Intelligence — 2018 - Present

Website

This Emblematic Project, funded by the Millennium Institute Foundational Research on Data (IMFD), has the objective of developing evolved AI techniques, advancing from systems based on memorizing patterns to one based on the semantic comprehension of these patterns and the learning of abstractions or procedures that promote high level reasoning.

Interpretability | Explanability | Deep Learning

SiREM : Robotic System to Train Working Memory — 2016 - 2017

PUJ Repository

A robotic system was developed to give a novel way to train the working memory, expecting a better result than classic video games to improve students' cognitive abilities. It consists of a robotic platform controlled by artificial intelligence to develop a memory game. Project carried out at the Pontificia Universidad Javeriana.

Serious Games | Educational Robotics | Machine Learning

Experience

Present – August 2018 | **Researcher, Millennium Institute Foundational Research on Data (IMFD), Chile**
- Research on topics related to fake news and social networks
- Development of interpretable models

PyTorch | Python | Natural Language Processing | Graph Networks

Present – May 2020 | **Lecturer, Pontificia Universidad Católica, Chile**

Lecturer of the AI certification program, in charge of the classes of :
- Natural Language Processing
- Video Analysis

PyTorch | Python | Natural Language Processing | Computer Vision

Present – March 2019 | **Teaching Assistant, Pontificia Universidad Católica, Chile**

Assitant of the classes of :
- Recommender Systems (2020-2)
- Machine Learning (2019-2)
- Cognitive Robotics (2019-1)

Python | Keras | PyTorch | Computer Vision | Information Retrieval

Present
January 2014

Co-Funder, AV Electronics, Ecuador

- Project manager
- Import manager

Electronics | Management

July 2018
April 2015

Lecturer, Instituto Técnologico CEMLAD, Ecuador

Lecturer of the electronics technology career, in charge of :

- Virtual and face-to-face lectures of microcontrollers, analog and digital electronics
- Organization of scheduled activities

Electronics | Microcontrollers | Programming

March 2015
January 2015

Laboratory Assistant, Universidad Politécnica Salesiana, Ecuador

Assitant at the FabLab of the University. In charge of :

- Guide laboratory practices
- Design and manufacture of printed circuit boards

FabLab | PCB | Microcontrollers

December 2018
April 2014

Instructor, Mastoosfe, Ecuador

Lecturer of technical courses :

- Introduction to programming
- OOP

Java | C++

Languages

Spanish ●●●●●
English ●●●●○

Forces

- Hard-working
- Patient
- Autonomous

Funding and Awards

2020 ELAP **scholarship** for short-term research exchange at Western University in Canada
2020 **Scholarship** to attend the International Meeting on Artificial Intelligence and its Applications (RIIAA 2020)
2020 **Scholarship** for attending the Lisbon Machine Learning School (LxMLS 2020)
2020 WiNLP's **grant** for attending ACL20
2020 ANID **scholarship** for doctoral studies in Chile
2019 **Scholarship** to attend the Latin American Meeting in Artificial Intelligence (Khipu19)
2019 ACM SIGCHI Gary Marsden **fund award** to attend RecSys19
2019 VRI **scholarship** for doctoral studies in Chile
2018 IMFD **scholarship** for doctoral studies in Chile
2017 **Scholarship** for an internship at RUND University of Russia
2017 Cum laude **distinction** in Master's studies
2017 **Distinction** awarded to the best Master's thesis
2015 ICETEX **scholarship** for Master's studies in Colombia
2015 **Award** for the second best graduate in undergraduate studies

Conferences and Talks

2020 *Evolution of NLP*, CREW20@Tecnológico de Morelia, (Invited Talk)
2020 *Interpretable Contextual Team-aware Item Recommendation*, RecSys20 (Poster-Virtual)
2020 *Adversarial Evaluation of BERT for Biomedical Named Entity Recognition*, WiNLP20@ACL20 (Poster-Virtual)
2019 *Trying to reach the state of the art*, Universidad Politécnica Salesiana (Invited Talk)
2019 *BERT's Behaviour Evaluation using Stress Tests*, Khipu19 (Poster)
2019 *Data Mining for Item Recommendation in MOBA Games*, RecSys19 (Poster)

Publications

Araujo, Vladimir, Andrés Carvallo et Denis Parra (2020). "Adversarial Evaluation of BERT for Biomedical Named Entity Recognition". In : *Proceedings of the 2020 Workshop on Widening NLP*. Association for Computational Linguistics.

Aspillaga, Carlos, Andrés Carvallo et Vladimir Araujo (2020). "Stress Test Evaluation of Transformer-based Models in Natural Language Understanding Tasks". English. In : *Proceedings of The 12th Language Resources and Evaluation Conference*. Marseille, France : European Language Resources Association, p. 1882-1894. ISBN : 979-10-95546-34-4. URL : `https://www.aclweb.org/anthology/2020.lrec-1.232`.

Cerda-Mardini, Patricio, Vladimir Araujo et Alvaro Soto (2020). “Translating Natural Language Instructions for Behavioral Robot Navigation with a Multi-Head Attention Mechanism”. In : *Proceedings of the 2020 Workshop on Widening NLP*. Association for Computational Linguistics.

Villa, Andrés et al. (2020). “Interpretable Contextual Team-Aware Item Recommendation : Application in Multiplayer Online Battle Arena Games”. In : *Fourteenth ACM Conference on Recommender Systems*. RecSys ’20. Virtual Event, Brazil : Association for Computing Machinery, p. 503-508. isbn : 9781450375832. doi : 10.1145/3383313.3412211. url : https://doi.org/10.1145/3383313.3412211.

Araujo, Vladimir, Diego Mendez et Alejandra Gonzalez (2019). “A Novel Approach to Working Memory Training Based on Robotics and AI”. In : *Information* 10.11, p. 350. doi : 10.3390/info10110350. url : https://doi.org/10.3390/info10110350.

Araujo, Vladimir, Felipe Rios et Denis Parra (2019). “Data Mining for Item Recommendation in MOBA Games”. In : *Proceedings of the 13th ACM Conference on Recommender Systems*. RecSys ’19. Copenhagen, Denmark : ACM, p. 393-397. isbn : 978-1-4503-6243-6. doi : 10.1145/3298689.3346986. url : http://doi.acm.org/10.1145/3298689.3346986.

Araujo, Vladimir, Alejandra Gonzalez et Diego Mendez (2018). “Dynamic Difficulty Adjustment for a Memory Game”. In : *Communications in Computer and Information Science*. Springer International Publishing, p. 605-616. doi : 10.1007/978-3-030-05532-5_46. url : https://doi.org/10.1007/978-3-030-05532-5_46.

References

Prof. Álvaro Soto
Pontificia Universidad Católica,
@ asoto@ing.puc.cl
2 2354 4440

Prof. Alejandra González
Pontificia Universidad Javeriana,
@ agonzalez@javeriana.edu.co
3208320 Ext. 5323

Prof. Lilia Gutiérrez
CEMLAD,
@ rectorado@cemlad.edu.ec
02 603 7825