Javier García Gilabert

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Education

Master's Exchange Student (Erasmus)
Helsinki, FI

AALTO UNIVERSITY
Sep. 2023 - Jan. 2024

Took part in advanced Master's courses covering topics such as statistics, computer vision, complex networks, and computational genomics during my Master's exchange program.

Master in Artificial Intelligence
Barcelona, ES

POLYTECHNIC UNIVERSITY OF CATALONIA (UPC) & UNIVERSITY OF BARCELONA (UB) & UNIVERSITY OF ROVIRA I VIRGILI (URV)
2022 - 2024

- Interuniversity master (taught in English).
- Achieved a mean degree mark of 8.85/10.
- Master Thesis: *Improving Multilingual Neural Machine Translation by projecting language representations*.

Bachelor's degree in Data Science
Valencia, ES

POLYTECHNIC UNIVERSITY OF VALENCIA (UPV)
2018 - 2022

- Got the best student award in Data Science. Honor granted for achieving the highest marks in my university degree.
- Achieved a mean degree mark of 9.3/10.
- Subjects passed with honors: 13.
- Received a Special Mention for my Bachelor Thesis: *Image Captioning using pre-trained GPT-2 models*.

Experience

Research Engineer in NLP
Barcelona, ES

BARCELONA SUPERCOMPUTING CENTER
Jan. 2024 - Present

Working as a research engineer in the Language Technologies Group at the Barcelona Supercomputing Center.

- NLP research engineer in Eloquence (European Project), ILENIA (Spanish National Project), AINA (Catalan Project).
- Developed Multilingual Neural Machine Translation models for the catalan language.
- Worked in low-resource machine translation languages.

Research Engineer in NLP
Barcelona, ES

MT@UPC (MACHINE TRANSLATION GROUP AT UPC)
Oct. 2022 - Sep. 2023

National Spanish Project ROB-IN (PLEC2021-007859). The primary goal of this project was to create a robot designed for continuous personalized assistance with self-explanatory capabilities. My role in this project involved contributing to the development of the Natural Language Processing (NLP) component. Duties included:

- Developing the dialogue system of the robot using the RASA framework.
- Investigating the phenomenon of hallucinations in neural machine translation models.

Research Collaboration Fellowship
Valencia, ES

PRHLT (PATTERN RECOGNITION AND HUMAN LANGUAGE TECHNOLOGY RESEARCH CENTER)
Oct. 2021 – Aug. 2022

I received a collaboration fellowship with the PRHLT group from the Spanish Ministry of Education, where I focused on researching state-of-the-art encoder-decoder architectures for image captioning. This research led to the development of my bachelor's thesis under the supervision of Francisco Casacuberta Nolla.

Undergraduate Research Assistant
Valencia, ES

DEPARTMENT OF APPLIED STATISTICS, OPERATIONS RESEARCH AND QUALITY AT UPV
Oct. 2019 - Aug. 2022

My role was mainly as a data scientist, dealing with data collection, processing, analysis, and the application of machine learning techniques to derive meaningful insights and solutions.

Publications

Javier Garcia Gilabert, Aleix Sant, Carlos Escolano, Francesca De Luca Fornaciari, Audrey Mash, and Maite Melero. 2024. BSC Submission to the AmericasNLP 2024 Shared Task. *In Proceedings of the 4th Workshop on Natural Language Processing for Indigenous Languages of the Americas (AmericasNLP 2024), pages 143–149, Mexico City, Mexico. Association for Computational Linguistics.*

NAACL

Javier Garcia Gilabert, Carlos Escolano, and Marta R. Costa-Jussà. 2024. ReSeTOX: Re-learning attention weights for toxicity mitigation in machine translation. *In Proceedings of the 25th Annual Conference of the European Association for Machine Translation, pages 37–58, Sheffield, England. European Association for Machine Translation.*

Preprint **Javier Garcia Gilabert**, Carlos Escolano, Aleix Sant, Francesca De Luca Fornaciari, Audrey Mash, Xixian Liao, and Maite Melero. 2024. Investigating the translation capabilities of Large Language Models trained on parallel data only. *arXiv preprint arXiv:2406.09140.*

Aleix Sant, Daniel Bardanca, José Ramom Pichel Campos, Francesca De Luca Fornaciari, Carlos Escolano, **Javier Garcia Gilabert**, Pablo Gamallo, Audrey Mash, Xixian Liao and Maite Melero. 2024. Training and Fine-Tuning NMT Models for Low-Resource Languages using Apertium-Based Synthetic Corpora. *To be appeared in The Ninth Conference on Machine Translation (WMT24).*

Awards and Grants

2022	**Best Student award in Data Science**, Honor granted for achieving the highest marks in my university degree.	*UPV*
2022	**Beca Santander Estudios Progreso 2021-2022**, The "Becas Santander Progreso" program is a grant given by Banco Santander S.A., whose objective is to facilitate access to education for students with the best academic records at a national level who are pursuing official Bachelor's or Master's degree studies.	*Banco Santander*
2021	**Awards to Graduates of the UPV with Best Academic Records**, Honor granted for achieving the highest marks in the second academic year of my University degree.	*UPV*
2021	**National Datathon Cajamar UniversityHack 2022**, Water prediction model presented in the Cajamar Water Footprint 2022 challenge of the national datathon University Hack 2022. We were able to arrive to the national final round.	*Cajamar*

Certificates

2023	**DeepLearn 2023 summer: 10th International Gran Canaria School on Deep Learning**,	*DeepLearn*
2021	**Improving Deep Neural Networks Hyperparameter Tuning, Regularization and Optimization**,	*Coursera*
2021	**Custom Models, Layers, and Loss Functions with TensorFlow**,	*Coursera*
2021	**Neural Networks and Deep Learning**,	*Coursera*
2021	**Introduction to TensorFlow for Artificial Intelligence, Machine Learning, and Deep Learning**,	*Coursera*
2019	**Deep learning aplicado al análisis de señales e imagen**,	*UPV*
2017	**First Certificate of English (FCE)**,	*Cambridge*

Skills

Programming	Python, R, LaTeX, Bash.
Frameworks	PyTorch, numpy, pandas, transformers.
Languages	Spanish (Native), Catalan (Native), English (Fluent).

Volunteering Activities

Mentor for international exchange students *UPV*
MENTOR *2022*
Assisting international exchange students in their adaptation to the university and the city of Valencia. As part of the university's MENTOR support program: https://www.upv.es/entidades/OPII/infoweb/pi/info/820230normali.html

Mentor for new university students *UPV*
PATU *2019-2021*
Advising new Data Science students in their transition to the university, as part of PATU (Programa de Acción Tutorial): https://www.upv.es/perfiles/futuro-alumno/integra-patu-es.html