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🔗 jrv.github.io/

Working Experience

- 03.2018– **Researcher - Doctoral Candidate**, *University of Helsinki*, Helsinki (Finland).
PRESENT Teaching duties and research centered on the development and implementation of multilingual and multimodal machine translation models.
- 10.2017– **Data Science Lab**, *SEDESOL - Secretariat of Social Development*, Remote Work.
- 01.2018 Directly involved in the development of a monitor of agricultural production via remote-sensing data as part of a hunger early-warning system for the Mexican government.
- 02.2017– **Collaboration**, *LFondry and Univerità degli Studi di L'Aquila*, L'Aquila (Italy).
- 09.2017 Customization of the Vehicle Routing Problem for for improving LFoundry's production line.
- 01.2014– **Project Coordinator and Research Assistant**, *INEGI - National Institute of Statistics and Geography*, Mexico City (Mexico).
08.2015 Assisting the Institute's vice-president on research for time series analysis, Bayesian Statistics and experiment design and modelling.
- 05.2016– **Modelling Camp**, *Hamburg Universität*, Hamburg (Germany).
- 06.2016 Implementation and simulation of a mathematical framework for describing pedestrian motion and crowd dynamics.
- 06.2012– **Vehicle Inspection Intern**, *Volkswagen*, Hannover (Germany).
- 08.2012 Preparing an automated infrared signal sender and receiver for creating a GUI to improve the production line operation.

Education

- 03.2018– **Ph. D. Language Technology**, *University of Helsinki (Finland)*.
PRESENT Funding from the European Research Council (ERC).
Supervisor: Prof. Jörg Tiedemann & co-Supervisor: Mathias Creutz
Focus Areas: Natural Language Processing, Neural Machine Translation, Math. Modelling
- 09.2015– **M. Sc. Mathematical Engineering**, *Università degli Studi dell'Aquila (Italy)*.
09.2017 Scholarship award from the European Commission.
Thesis: The Vehicle Routing Problem - An Application and Proposed Heuristics.
Adviser: Prof. Claudio Arbib & co-Adviser: Prof. Stefano Smriglio
Focus Areas: Mathematical Modelling, ODEs, PDEs, Optimization GPA: 110/110
- 04.2016– **M. Sc. Technomathematik**, *Hamburg Universität (Germany)*.
09.2016 Joint degree awarded as participant of the Erasmus Mundus Joint MSc. in Mathematical Modelling in Engineering - MathMods (<http://www.mathmods.eu/>)
Focus Areas: non-smooth Convex Optimization and Numerical Approximation methods for PDEs (Galerkin Methods, Finite Differences and Finite Volumes) GPA: 2.03/5
- 08.2008– **B.Sc. Applied Mathematics**, *Instituto Tec. Autónomo de México (Mexico)*.
06.2014 Thesis: A Bayesian Approach to Time Series Smoothing via the Hodrick-Prescott Filter.
Adviser: Prof. Enrique de Alba Guerra
Focus areas: Statistics, Probability, Linear and non-Linear Optimization GPA: 8,4/10
- 09.2011– **Exchange Program from the German Academic Exchange Service (DAAD)**,
07.2012 *Universität des Saarlandes (Germany)*.
Scholarship award from the DAAD. Statistics & economics.

Others

Programming

Programs	Python, R, Matlab, SPSS, TeX, Office
ML libraries	pytorch, torchtext, torchaudio, huggingface transformers, pytorch-lightning, nltk
Platforms	Linux, Windows

Languages

Native	Spanish	
C2	English	<i>Toefl iBT, 2014 (107/120)</i>
C1	Italian	<i>DALI-C1, 2017 (80.9%)</i>
C1	German	<i>DSH-2, 2012 (86% oral, 67% written)</i>
B1	Finnish	<i>YKI-keskitaso, 2020</i>

Publications

- 2020 **A Systematic Study of Inner-Attention-Based Sentence Representations in Multilingual Neural Machine Translation.**
R Vazquez, A Raganato, J Tiedemann and M Creutz. In Computational Linguistics. Volume 46, Issue 2 (Accepted for Publication).
- 2020 **The University of Helsinki Submission to the IWSLT2020 Offline Speech Translation Task..**
R Vazquez, M Aulamo, U Sulubacak, and J Tiedemann. In Proceedings of the 17th International Conference on Spoken Language Translation (IWSLT)
- 2019 **Multilingual NMT with a language-independent attention bridge.**
R Vazquez, A Raganato, J Tiedemann and M Creutz. In Proceedings of the 4th Workshop on Representation Learning for NLP (Repl4NLP).
- 2019 **An Evaluation of Language-Agnostic Inner-Attention-Based Representations in Machine Translation.**
A Raganato, R Vazquez, M Creutz and J Tiedemann. In Proceedings of the 4th Workshop on Representation Learning for NLP (Repl4NLP).
- 2019 **The University of Helsinki Submission to the WMT2019 Parallel Corpus Filtering Task.**
R Vazquez, U Sulubacak and J Tiedemann. In Proceedings of the Fourth Conference on Machine Translation: Shared Task Papers.
- 2019 **The University of Helsinki Submissions to the WMT2019 Similar Languages Translation Task.**
Y Scherrer, R Vazquez, and S Virpioja. In Proceedings of the Fourth Conference on Machine Translation: Shared Task Papers.
- 2019 **The University of Helsinki Submission to the WMT2019 News Translation Task.**
A Talman, U Sulubacak, R Vazquez, Y Scherrer, S Virpioja, A Raganato, A Hurskainen, and J Tiedemann. In Proceedings of the Fourth Conference on Machine Translation: Shared Task Papers
- 2018 **The MeMAD Submission to the WMT18 Multimodal Translation Task.**
SA Grönroos, B Huet, M Kurimo, J Laaksonen, B Merialdo, P Pham, M Sjöberg, U Sulubacak, J Tiedemann, R Troncy and R Vázquez. In 3rd Conference on Machine Translation (WMT 2018)