

Alberto Poncelas Rodriguez

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Work Experience

- May 2021 – Present • **Research Scientist** in Rakuten, Singapore.
Research is in the area of Machine Translation.
- Oct 2019 – Apr 2021 • **Postdoctoral Researcher** in ADAPT Centre, Ireland.
Research is in the area of Machine Translation and Natural Language Processing. Investigation of indirect translation and sentiment classification. Technologies: Python, Pandas, Numpy, Spacy, Keras.
- Oct 2015 – Sep 2019 • **PhD Researcher** in ADAPT Centre, Ireland.
Research is in the area of Machine Translation and Natural Language Processing. Use of data-selection techniques and synthetic data generation for improving machine-translation. Technologies: OpenNMT, Python, Scala, C language.
- Aug 2013 – Sep 2015 • **Big Data Engineer** in BEEVA, Spain
Projects involved: (i) Development of a tool for calculating the risks involved in the granting of loans;(ii) Data exploration using Spark and Scala; (iii) A client segmentation analysis using data mining techniques. Technologies: R and Hive; and (iv) Development of a tool based in intelligent agent ecosystem. Technologies: node.js and Neo4j.
- Jun 2012 – Jul 2012 • **Software Developer** in LKS, Spain
Use of Oracle PL/SQL, Oracle Forms and Oracle Reports technologies
- May 2011 – Aug 2011 • **Web Developer** in Sectoro4 Consultoría Y Soluciones Informáticas S.L.
Web application development using the following technologies: PHP (CodeIgniter framework), HTML, jQuery, AJAX, CSS, MySQL

Education

- 2015 – 2019 • **Ph.D., Machine Translation** in Dublin City University, Ireland.
Research in the area of Machine Translation.
Thesis title: *Improving Transductive Data Selection Algorithms for Machine Translation*
- 2012 – 2013 • **M.Sc., Machine Learning** in University of the Basque Country, Spain.
Thesis title: *Preprocess and data analysis techniques for affymetrix DNA microarrays using bioconductor: a case study in Alzheimer disease*
- 2009 – 2010 • **Erasmus study year** in École pour l'informatique et les techniques avancées (EPITA), France
- 2004 – 2011 • **B.Sc. Computer Science** in University of the Basque Country, Spain.

Certificates and Courses

2016 • **Machine learning** Coursera
<https://www.coursera.org/account/accomplishments/certificate/5XKFZ85CN8U8>

2014 • **Data Science Specialization** Coursera
<https://www.coursera.org/account/accomplishments/specialization/3QE0AonkEe>

Teaching Experience

- 2021 • **Teaching** in Dublin City University.
Machine Learning
- 2020 • **Teaching** in Dublin City University.
Machine Learning
Statistical Machine Translation
• **Teaching** in Trinity College Dublin.
Interlingual Technologies: Machine Translation lecture.
- 2019 • **Teaching Assistant** in Dublin City University.
Statistical Machine Translation: teaching, coding/evaluation of lab exercises and grading.
- 2006 • **Teaching Assistant** in University of the Basque Country.
Data Structures and Algorithms: teaching, coding/evaluation of lab exercises and grading.
- 2005–2008 • **Teaching Assistant** in University of the Basque Country.
Programming I: teaching, coding/evaluation of lab exercises and grading.

Research Publications

- 1 **Poncelas, A.**, Aboomar, M., Buts, J., Hadley, J., & Way, A. (2020). A Tool for Facilitating OCR Postediting in Historical Documents. In *Workshop on Language Technologies for Historical and Ancient Languages, LT4HALA* (pp. 47–51). Marseille, France.
- 2 **Poncelas, A.**, Buts, J., Hadley, J., & Way, A. (2020). Using Multiple Subwords for Improving English-Esperanto Automated Literary Translation Quality. In *Proceedings of the 3rd Workshop on Technologies for MT of Low Resource Languages (LoresMT)* (pp. 108–117). Suzhou, China.
- 3 **Poncelas, A.**, de Buy Wenniger, G. M., & Way, A. (2020). Improved feature decay algorithms for statistical machine translation. *Natural Language Engineering*, 1–21.
- 4 **Poncelas, A.**, Lohar, P., Way, A., & Hadley, J. (2020). The Impact of Indirect Machine Translation on Sentiment Classification. In *Proceedings of the 14th Conference of the Association for Machine Translation in the Americas, AMTA* (pp. 78–88). Orlando, Florida.
- 5 **Poncelas, A.**, Pidchamook, W., Liu, C.-H., Hadley, J., & Way, A. (2020). Multiple Segmentations of Thai Sentences for Neural Machine Translation. In *Proceedings of The 1st Joint Spoken Language Technologies for Under-resourced languages and Collaboration and Computing for Under-Resourced Languages Workshop, SLTU-CCURL* (pp. 240–244). Marseille, France.

- 6 Popović, M. & **Poncelas, A.** (2020a). Extracting correctly aligned segments from unclean parallel data using character n-gram matching. In *Konferenca Jezikovne tehnologije in digitalna humanistika* (pp. 74–80). Ljubljana, Slovenia.
- 7 Popović, M. & **Poncelas, A.** (2020b). Neural Machine Translation between similar South-Slavic languages. In *Proceedings of the Fifth Conference on Machine Translation (WMT 2020)* (pp. 428–434).
- 8 Popović, M., **Poncelas, A.**, Way, A., & Bakaric, M. B. (2020). Neural Machine Translation for Translating into Croatian and Serbian. In *Proceedings of the Seventh Workshop on NLP for Similar Languages, Varieties and Dialects* (pp. 102–113). Barcelona, Spain.
- 9 Soto, X., Shterionov, D., **Poncelas, A.**, & Way, A. (2020). Selecting Backtranslated Data from Multiple Sources for Improved Neural Machine Translation. In *Proceedings of the 58th Annual Meeting of the Association for Computational Linguistics, ACL* (pp. 3898–3908). Seattle, USA.
- 10 Way, A., Haque, R., Xie, G., Gaspari, F., Popović, M., & **Poncelas, A.** (2020a). Facilitating Access to Multilingual COVID-19 Information via Neural Machine Translation. *arXiv preprint arXiv:2005.00283*.
- 11 Way, A., Haque, R., Xie, G., Gaspari, F., Popović, M., & **Poncelas, A.** (2020b). Rapid Development of Competitive Translation Engines for Access to Multilingual COVID-19 Information. *Informatics*, 7(2), 1–21.
- 12 **Poncelas, A.** (2019). *Improving transductive data selection algorithms for machine translation* (Doctoral dissertation, Dublin City University).
- 13 **Poncelas, A.**, de Buy Wenniger, G. M., & Way, A. (2019a). Adaptation of Machine Translation Models with Back-translated Data using Transductive Data Selection Methods. In *20th International Conference on Computational Linguistics and Intelligent Text Processing, CICLING*. La Rochelle, France.
- 14 **Poncelas, A.**, de Buy Wenniger, G. M., & Way, A. (2019b). Transductive Data-Selection Algorithms for Fine-Tuning Neural Machine Translation. In *Proceedings of The 8th Workshop on Patent and Scientific Literature Translation* (pp. 13–23). Dublin, Ireland.
- 15 **Poncelas, A.**, Popović, M., Shterionov, D., de Buy Wenniger, G. M., & Way, A. (2019). Combining SMT and NMT Back-translated Data for Efficient NMT. In *Proceedings of Recent Advances in Natural Language Processing (RANLP)* (pp. 922–931). Varna, Bulgaria.
- 16 **Poncelas, A.**, Sarasola, K., Dowling, M., Way, A., Labaka, G., & Alegria, I. (2019). Adapting NMT to caption translation in Wikimedia Commons for low-resource languages. *Procesamiento del Lenguaje Natural*, 63, 33–40.
- 17 **Poncelas, A.** & Way, A. (2019). Selecting Artificially-Generated Sentences for Fine-Tuning Neural Machine Translation. In *Proceedings of the 12th International Conference on Natural Language Generation, INLG* (pp. 219–228). Tokyo, Japan.
- 18 Vanmassenhove, E., Moryossef, A., **Poncelas, A.**, Way, A., & Shterionov, D. (2019). ABI Neural Ensemble Model for Gender Prediction Adapt Bar-Ilan Submission for the CLIN29 Shared Task on Gender Prediction. In *Computational Linguistics of the Netherlands CLIN29*. Groningen, The Netherlands.
- 19 Dowling, M., Lynn, T., **Poncelas, A.**, & Way, A. (2018). SMT versus NMT: Preliminary comparisons for Irish. In *Technologies for MT of Low Resource Languages (LoResMT 2018)* (pp. 12–20). Boston, USA.
- 20 **Poncelas, A.**, de Buy Wenniger, G. M., & Way, A. (2018). Data Selection with Feature Decay Algorithms Using an Approximated Target Side. In *The 15th International Workshop on Spoken Language Translation (IWSLT 2018)* (pp. 173–180). Bruges, Belgium.

- 21 **Poncelas, A.**, Maillette de Buy Wenniger, G., & Way, A. (2018). Feature Decay Algorithms for Neural Machine Translation. In *Proceedings of the 21st Annual Conference of the European Association for Machine Translation, EAMT* (pp. 239–248). Alicante, Spain.
- 22 **Poncelas, A.**, Shterionov, D., Way, A., de Buy Wenniger, G. M., & Passban, P. (2018). Investigating Backtranslation in Neural Machine Translation. In *Proceedings of the 21st Annual Conference of the European Association for Machine Translation, EAMT* (pp. 249–258). Alicante, Spain.
- 23 **Poncelas, A.**, Way, A., & Sarasola, K. (2018). The ADAPT System Description for the IWSLT 2018 Basque to English Translation Task. In *International Workshop on Spoken Language Translation (IWSLT)* (pp. 72–82). Bruges, Belgium.
- 24 Silva, C. C., Liu, C.-H., **Poncelas, A.**, & Way, A. (2018). Extracting In-domain Training Corpora for Neural Machine Translation Using Data Selection Methods. In *Proceedings of the Third Conference on Machine Translation: Research Papers, WMT* (pp. 224–231). Brussels, Belgium.
- 25 Dzendzik, D., **Poncelas, A.**, Vogel, C., & Liu, Q. (2017). ADAPT Centre Cone Team at IJCNLP-2017 Task 5: A Similarity-Based Logistic Regression Approach to Multi-choice Question Answering in an Examinations Shared Task. In *Proceedings of the IJCNLP 2017, Shared Tasks* (pp. 67–72). Taipei, Taiwan.
- 26 Liu, C.-H., Groves, D., Hayakawa, A., **Poncelas, A.**, & Liu, Q. (2017). Understanding Meanings in Multilingual Customer Feedback. In *Proceedings of First Workshop on Social Media and User Generated Content Machine Translation (Social MT 2017)*. Prague, Czech Republic.
- 27 Liu, C.-H., Moriya, Y., **Poncelas, A.**, & Groves, D. (2017). IJCNLP-2017 Task 4: Customer Feedback Analysis. In *Proceedings of the IJCNLP 2017, Shared Tasks* (pp. 26–33). Taipei, Taiwan.
- 28 **Poncelas, A.**, Maillette de Buy Wenniger, G., & Way, A. (2017). Applying N-gram Alignment Entropy to Improve Feature Decay Algorithms. *The Prague Bulletin of Mathematical Linguistics*, 108(1), 245–256.
- 29 **Poncelas, A.**, Way, A., & Toral, A. (2016). Extending Feature Decay Algorithms Using Alignment Entropy. In *International Workshop on Future and Emerging Trends in Language Technology, FETLT* (pp. 170–182). Springer. Seville, Spain.
- 30 **Poncelas, A.** (2013). *Preprocess and Data Analysis Techniques for Affymetrix DNA Microarrays using Bioconductor: a case study in Alzheimer disease* (Master's thesis, University of the Basque Country).

Presentations

LoResMT 2020	• Using Multiple Subwords for Improving English-Esperanto Automated Literary Translation Quality Online
AMTA 2020	• The Impact of Indirect Machine Translation on Sentiment Classification Online
Mots/Machines 2020	• The sentiment classification on indirect translation (in French) Brest, France
PSLT 2019	• Transductive Data-Selection Algorithms for Fine-Tuning Neural Machine Translation Dublin, Ireland
RANLP 2019	• Combining SMT and NMT Back-Translated Data for Efficient NMT Varna, Bulgaria

Presentations (continued)

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| CICLING 2019 | • Adaptation of Machine Translation Models with Back-translated Data using Transductive Data Selection Methods La Rochelle, France |
| SocialMT 2017 | • Understanding Meanings in Multilingual Customer Feedback Prague, Czech Republic |
| IJCNLP 2017 | • IJCNLP-2017 task 4: Customer feedback analysis Workshop presentation Taipei, Taiwan |
| | • A Similarity-Based Logistic Regression Approach to Multi-choice Question Answering in an Examinations Shared Task Taipei, Taiwan |
| FETLT 2016 | • Extending feature decay algorithms using alignment entropy Sevilla, Spain |

Miscellaneous

Professional services

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| 2021 | • European Chapter of the Association for Computational Linguistics (EACL) Reviewer |
| 2020 | • LoResMT (AAACL 2010) Reviewer |
| | • Post-Editing in Modern-Day Translation (PEMDT1) Reviewer |
| | • Transactions on Asian and Low-Resource Language Information Processing (TALLIP) Reviewer |
| | • Machine Translation journal Reviewer |
| | • ACL 2020 Reviewer |
| 2019 | • MTSummit 2019 PC member / Proceedings chair |
| | • LoResMT (MTSummit 2019) PC member / Reviewer |
| | • RANLP 2019 PC member / Reviewer |
| | • Language Resources and Evaluation (LREV) Reviewer |
| 2018 | • LoResMT (AMTA 2018) Reviewer |
| 2017 | • Cupral Workshop (IJCNLP 2017) Reviewer |
| | • Customer Feedback Analysis Shared Task (IJCNLP 2017) Co-organizer / Reviewer |
| 2015 | • DL4MT Winter School: Deep Learning for Machine Translation volunteer |

Grants and Awards

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| 2018 | • President's Awards for Engagement (nominated). |
| 2017 | • School of computing travel grant |
| | • "Multi-choice Question Answering in Examinations" (IJCNLP 2017) Shared task winner |
| 2015 – 2019 | • Science Foundation Ireland (SFI). PhD funded by SFI through the ADAPT Centre. |
| 2009 – 2010 | • Erasmus Scholarship. |

Miscellaneous (continued)

Scientific outreach

- 2010 • **Rapid Development of Competitive Translation Engines for Access to Multi-lingual COVID-19 Information**
- 2017 – 2018 • **My Thesis in 3 in French**
- 2016 – 2019 • **DCU Research Day**

Volunteering Experience

- 2017 – 2019 • **Coordinator** All Ireland Linguistics Olympiad (AILO) and International Linguistics Olympiad (2017)
- 2018 • **Spanish Teacher**
- 2016 • **Intercultural Ambassador.**

Languages

- Native: Spanish
- Proficiency level: English
- Intermediate level: French, Basque
- Basic level: Japanese, Serbian, German, Italian