

EDUCATION

The University of Sheffield

Ph.D. in Computer Science. Supervisor: Professor Nikolaos Aletras

Sheffield, UK

2019–Present

- Natural Language Processing Group (SheffieldNLP)
- Focus: multimodal social media analysis, data collection, language modelling

The University of Sheffield

M.Sc. in Computer Science, (Distinction). Supervisor: Professor Rob Gaizauskas

Sheffield, UK

2018–2019

- Dissertation: Machine Comprehension Using Commonsense Knowledge

Instituto Tecnológico Autónomo de México

B.Sc. in Computer Engineering, GPA. 8.91/10. Supervisor: Dr. Fernando Esponda

Mexico City, MEX

2012–2016

- Dissertation: Time Series Modeling for Stock Market Prediction Using Machine Learning

PROFESSIONAL EXPERIENCE

University of Sheffield – Department of Computer Science

Research Associate at the Natural Language Processing Group

Sheffield, UK

Aug 2023 – Now

Amazon

Applied Scientist Intern at Alexa Shopping Science UK

London, UK

Jun 2022 – Dec 2022

University of Sheffield – Department of Computer Science

Teaching Assistant

Sheffield, UK

Sep 2020 – Jun 2023

- Text Processing COM 3110/4115 (Autumn 2020, 2021).
- Natural Language Processing COM6513 (Spring 2020, 2021, 2022, 2023).

Deep Dive Data Science

Data Scientist

Mexico City, MEX

Mar 2017 – Sep 2018

- Developed data science solutions for financial, insurance and real estate companies using natural language processing, social media analysis and geospatial analysis.

Nanyang Technological University

Research Intern with the SenticNet Team

Singapore, SGP

Summer 2016

- Explored sentiment analysis models using data in English and Spanish.

SKILLS

- **NLP/ML Software:** PyTorch, Tensorflow, HuggingFace Transformers, NLTK, Keras
- **Programming:** Python, Bash, Java, SQL

LANGUAGES

- **English** Fluent
- **Spanish** Native
- **German** Basic (A1)

TEACHING & ACADEMIC ACTIVITIES

- **Reviewer** ACL, NACL, EACL, ARR, NLLP Workshop, W-NUT Workshop 2020–Now
- **Teaching Assistant** Assist students during practical sessions and grade assessments following a marking criteria set by the Course Leader. 2020–2023
- **LxMLS Monitor** Tutor students during the lab sessions of the Lisbon Machine Learning School. 2023
- **MSc. Dissertation Co-Supervisor.** Co-supervised Xiao Ao (with Daniel Preotiuc-Pietro and Nikolaos Aletras), a MSc. student from Sheffield University with the project: *Combining Humor and Sarcasm for Improving Political Parody Detection* 2022
- **Equality, Diversity, and Inclusion Analysis** Data analysis on the gender pay gap and awarding gap in the Computer Science Department of Sheffield University. 2021
- **OxML 2021.** Attended the Oxford Machine Learning Summer School 2021
- **LxMLS 2020** Attended the Lisbon Machine Learning Summer School 2020
- **Code First Girls Instructor** Delivered an introduction to Python programming course (remote) for students who identify as a woman or non-binary and are complete beginners in programming. 2020

INVITED TALKS

- **CoAStAL NLP, University of Copenhagen.** Analyzing Social Media with Text and Images Oct 2023
- **IDS Research Talk, Maastricht University.** NLP for Computational Social Science Apr 2022
- **Annotation hackathon, Utrecht University** Introduction to machine learning and annotations Apr 2022
- **VVA** Multidisciplinary discussion on the impact of influencers on advertising and consumer protection Nov 2021
- **AI4Dignity Counterathon 2021, LMU** Multidisciplinary discussion on datasets and NLP models for extreme speech detection Jul 2021
- **ITAM Research Seminar** Machine Learning Models for Analyzing Social Media Text Mar 2021
- **Sheffield NLP Seminar** NLP for Computational Social Science Dec 2020

PUBLICATIONS

- [1] E. Gow-Smith and **Sánchez Villegas, Danae**, “Sheffield’s submission to the AmericasNLP shared task on machine translation into indigenous languages”, in *Proceedings of the Workshop on Natural Language Processing for Indigenous Languages of the Americas (AmericasNLP)*, Toronto, Canada: Association for Computational Linguistics, Jul. 2023, pp. 192–199.
- [2] **Sánchez Villegas, Danae**, C. Goanta, and N. Aletras, “A multimodal analysis of influencer content on twitter”, in *Proceedings of the 13th International Joint Conference on Natural Language Processing and the 3rd Conference of the Asia-Pacific Chapter of the Association for Computational Linguistics*, Nusa Dua, Bali: Association for Computational Linguistics, Nov. 2023, pp. 225–240.
- [3] X. Ao, **Sánchez Villegas, Danae**, D. Preotiuc-Pietro, and N. Aletras, “Combining humor and sarcasm for improving political parody detection”, in *Proceedings of the 2022 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies*, Seattle, United States: Association for Computational Linguistics, Jul. 2022, pp. 1800–1807.
- [4] **Sánchez Villegas, Danae** and N. Aletras, “Point-of-Interest Type Prediction using Text and Images”, in *Proceedings of the 2021 Conference on Empirical Methods in Natural Language Processing*, Online and Punta Cana, Dominican Republic: Association for Computational Linguistics, Nov. 2021, pp. 7785–7797.
- [5] **Sánchez Villegas, Danae**, S. Mokaram, and N. Aletras, “Analyzing Online Political Advertisements”, in *Findings of the Association for Computational Linguistics: ACL-IJCNLP 2021*, Online: Association for Computational Linguistics, Aug. 2021, pp. 3669–3680.

- [6] A. Maronikolakis, **Sánchez Villegas, Danae**, D. Preotiuc-Pietro, and N. Aletras, “Analyzing Political Parody in Social Media”, in *Proceedings of the 58th Annual Meeting of the Association for Computational Linguistics*, Online: Association for Computational Linguistics, Jul. 2020, pp. 4373–4384.
- [7] **Sánchez Villegas, Danae**, D. Preotiuc-Pietro, and N. Aletras, “Point-of-Interest Type Inference from Social Media Text”, in *Proceedings of the 1st Conference of the Asia-Pacific Chapter of the Association for Computational Linguistics*, Online: Association for Computational Linguistics, Dec. 2020, pp. 804–810.

SCHOLARSHIPS AND AWARDS

- **Scholarship**, UKRI Centre for Doctoral Training in Speech and Language Technologies 2019–2023
Tuition fees and stipend for living expenses during Ph.D. studies at the University of Sheffield.
- **Scholarship**, Consejo Nacional de Ciencia y Tecnología (Conacyt) 2018–2019
Stipend for living expenses during my M.Sc. at the University of Sheffield.
- **Honorable Mention**, Ex ITAM Research Award 2018
Research award for my BSc. dissertation.