Gloria del Valle Cano

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EDUCATION

MSc Data Science June 2022

Autonomous University of Madrid

- Studying advanced methods in Statistics, Processing of Temporary Information and Stochastic Processes, inter alia.
- Attending to elective courses such as Natural Language Processing, Deep Learning for Image and Video Classification, Bayesian Methods and Functional Methods in Machine Learning.

BSc Computer Science Engineering July 2021

Autonomous University of Madrid

- Studying solutions based on AI, computer security, systems administration and Big Data.
- Working in part-time jobs as sales assistant.

EXPERIENCE

Research Assistant January 2022 – Present

Autonomous University of Madrid · OBERAXE (State Secretariat for Migration) *Madrid, Spain*

- Part of REAL-UP, Combating Hate Speech Project approved by the Citizens, Equality, Rights and Values Programme (CERV) of the European Commission under the Call: CERV-2021-EQUAL.
- Design and implementation of the main hate speech algorithm for the improvement of an IT tool developed for the Spanish Government under the supervision of my mentor, Lara Quijano-Sánchez.
- Creation of automatic processes for detecting hate speech beyond Twitter.

R&D Tax Consultant Intern October 2019 – March 2020

KPMG Spain *Madrid, Spain*

- Drafting scientific and technological descriptions of AI projects.
- Automatizing spreadsheets for the value of claims, apportioned between the different R&D regimes.
- Explored ways to analyse and present relevant financial information to support R&D tax credit claims.

PROJECTS

SocialHaterBERT · *Bachelor's Thesis* June 2021

- Main title of *Detecting hate speech messages on Twitter: a study based on social network profiles.*
- Conducted in cooperation with the Spanish National Office Against Hate Crimes of the Spanish State Secretariat for Security (Ministry of Interior).
- Proposal for a novel NLP approach for feature analysis based on user profiles, related social environment and generated tweets.
- Development of a combined BERT-based model capable of analyzing features beyond those intrinsically lie in the text for the detection of hate speech on Twitter.

COURSES AND CERTIFICATES

Reinforcement Learning Specialization (1/4) · *University of Alberta*	July 2022
IBM Data Science Professional Certificate (3/10) · *IBM*	July 2021
Python for Data Science · *Coursera Project Network*	July 2020
Natural Language Processing · *National Research University Higher School of Economics*	August 2019
Applied Text Mining in Python · *University of Michigan*	June 2019

Publications

Articles in conference proceedings

- del Valle, G. & Quijano-Sánchez, L.& Gómez, J., *Detecting Hate Messages on Twitter: A BERT-based Model for the Classification of Hate Speech in Spanish*, in Proceedings of International Congress "Hate and Discrimination in turbulent times", 2021, Málaga, Spain.

Awards and achievements

Finalist at European Crime Prevention Award and Best Practice Conference (BPC-ECPA) October 2021

- Entry: SocialHaterBERT: automatic detection and monitoring of hate speech on Twitter through a dichotomous approach based on textual analysis and user profiles.
- Winner of the internal selection process in Spain.

Languages

English: Advanced   **Spanish**: Native   **French**: Elementary

Technical Skills

Advanced knowledge: Python, C, LaTeX, SQL, Neo4j, NLP Transformers.
Intermediate knowledge: C++, R, Lisp, Java, Swift, HTML/CSS, JavaScript, MongoDB.