ABSTRACT
The main objective of this abstract is to delineate the significant contributions made by the authors to the IVERES project in collaboration with the Charles III University of Madrid. The document will focus on the investigation and development undertaken to aid in the detection of fake news, thereby defending the truth.

KEYWORDS
Artificial Intelligence, Natural Language Processing, Deep Learning, Bot Detection, Social Networks, Text Classification, Text Analysis, Fake News, misinformation

ACM Reference Format:

1 INTRODUCTION
Social networks have undergone significant evolution and witnessed a surge in usage over the years, transforming into indispensable platforms for connecting individuals. However, the emergence of bots on these networks has introduced challenges, potentially leading to misinformation and unreliable information dissemination. This project is conducted in collaboration with the RTVE-UC3M cathedra under the IVERES project, addresses this issue by developing an Artificial Intelligence (AI) tool to identify false information on social networks, combating misinformation, deception and fake news.

2 BOT DETECTION SYSTEM
The primary objective of this research is to create a bot detection system using AI techniques, specifically focusing on studying user account characteristics and analyzing content through Natural Language Processing, including text classification. The development of a web application using the Angular framework facilitates user interaction, allowing for the input of a user account, and the subsequent determination of whether the account corresponds to a bot or a human.

3 IVERES PROJECT
Additionally, this project is an integral part of the IVERES project, initiated by the UC3M’s Knowledge Reusing research group, in collaboration with journalists of RTVE. The acronym IVERES represents “Identification, VERification, and RESponse” reflecting the purpose of the tool of finding and identifying information in social networks.
de Barcelona (UAB), Universidad Politécnica de Cataluña (UPC) and Universidad Carlos III de Madrid (UC3M). Each of them has a focus on a different type of carrier. The UGR is working in analyzing audio in order to detect fake news embedded in their contents. The UPC evaluates videos from social media to transcript their text and monitor videos to detect possible misinformation. While the UAB tests the each functionality.

Additionally, the IVERES project is funded by the Ministry of Science and Innovation, specifically from the “Recovery, Transformation and Resilience Plan” and is part of the 2021 call of the European Union for R&D&I projects focused on scientific research and innovation.

With a focus on combating misinformation, the project aims to search, monitor and filter resources on major social networks. Furthermore, the system employs knowledge representation created in collaboration with RTVE reporters in order to filter resources, contributing to a more accurate identification of misinformation.

The developed system counts with the following workflow:

One notable accomplishment is the design and implementation of a bot detection system utilizing Deep Learning algorithms to predict whether an account on a social network is managed by a bot or a human. The effectiveness of the tool is evidenced by its current integration into the workflow of the RTVE Verifica[4] team, which has resulted in the enhancement of the productivity and efficiency in verifying and reporting fake news and malicious users on various social networks.

REFERENCES

revised 5 April 2024; accepted 15 March 2024