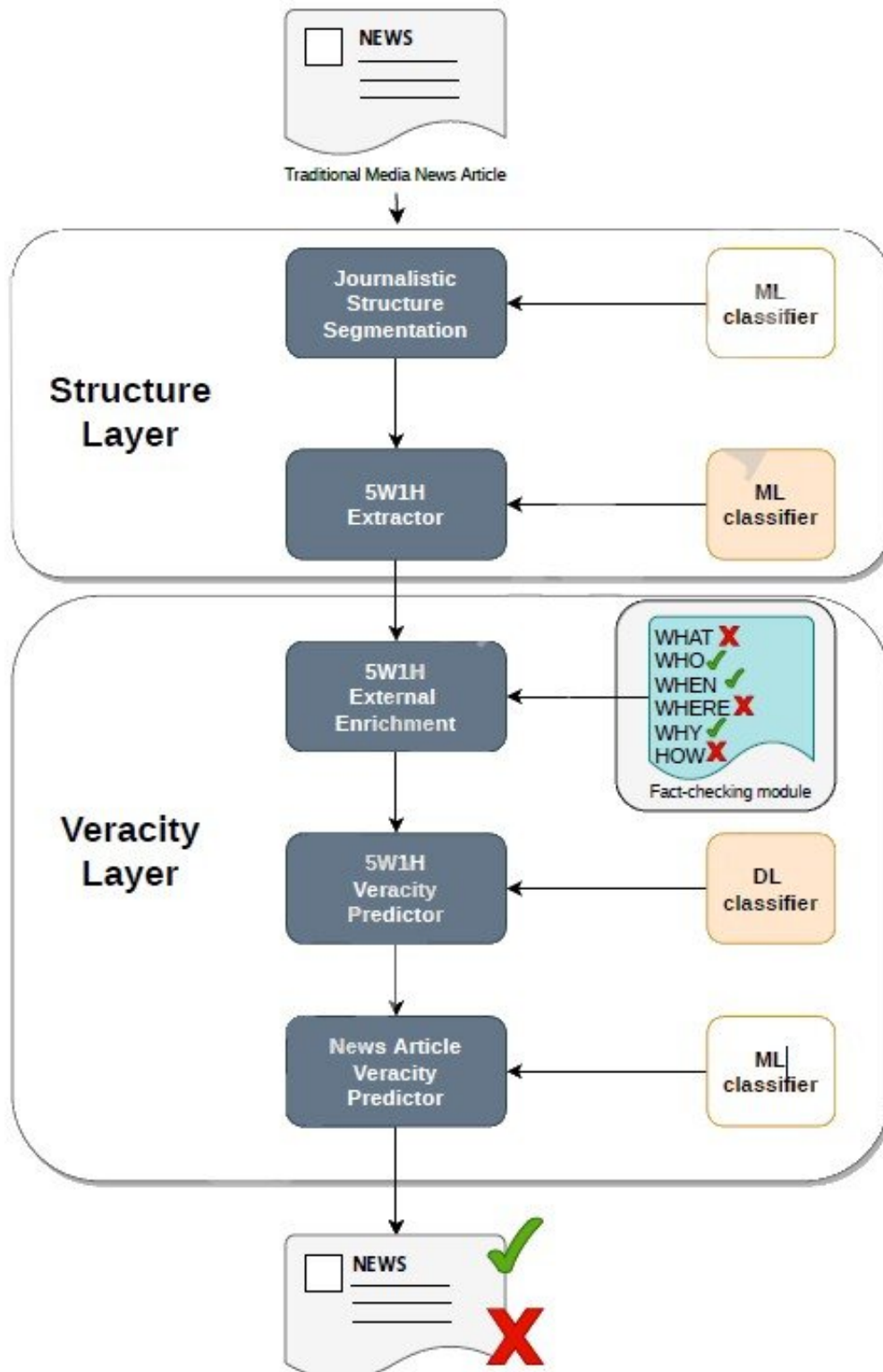


Development of a smart system for fake news detection

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The system analyses the structure of the published news item taking into account traditional journalistic standards: the 5W+H rule and the inverted pyramid.
Credit: Fundación Descubre

A research team from the universities of Jaén and Alicante has created an application that automatically analyzes news stories and determines their truthfulness with a high degree of accuracy. Although the model is still in the testing phase, it is proposed as a useful tool for filtering the vast amount of information that reaches journalists and private readers every day.

To identify fake [news](#), scientists have developed machinelearning-based [false news](#) and misinformation credibility inference models. These artificial intelligence techniques allow the system to analyse the news on two levels to detect whether there are inconsistencies in the content and whether the structure matches what any publication with journalistic rigor should possess.

In the journal *Expert Systems with Applications*, the researchers have published an article entitled "Exploiting discourse structure of traditional digital media to enhance automatic fake news detection" in which they present the prototype of a '[fake news](#)' detector for websites. This tool aims to offer greater confidence to the reader and to provide journalists with new tools that allow them to distinguish between different pieces of information.

The system analyzes the structure of the published news item taking into account traditional journalistic standards: the 5W+H rule and the inverted pyramid. These references are based on the fact that a rigorous news story should contain information that answers the six basic questions (what, when, where, who, why and how) and should be presented in descending priority from what is most important to the finer details. "The structure of a publication gives clues as to whether it has a journalistic basis or whether it is instead simulating a real news story," Fundación Descubre was told by Miguel Ángel García, researcher at the

University of Jaén and one of the authors of the article.

From the analysis of natural language, experts develop an algorithm that detects information that does not match this structure. These calculations are based on techniques of what is known as [machine learning](#), whereby the system 'learns' as it accumulates more and more data.

In addition, the machine is capable of processing thousands of simultaneous data in seconds, something that a person could not do. "Thus, journalists can compare and contrast sources, detect incorrect structures, viral contents or inconsistencies between the headline and the body of the news immediately and automatically. The end user will also have clues as to whether the news they read meets certain standards or not," adds Estela Saquete, researcher at the University of Alicante and another author of the article.

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More information: Alba Bonet-Jover et al. Exploiting discourse structure of traditional digital media to enhance automatic fake news detection, *Expert Systems with Applications* (2020). [DOI:](#)

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