The Kyoto College of Graduate Studies for Informatics
Professional Communications in the ICT Industry(b)
Fall 2024 Semester

Homework for Lecture 4

Instructions

1. Read the following conclusion from an article titled "Sentiment Analysis for Fake News Detection" in the journal 'Electronics' (2021) by M.A. Alonso, D. Vilares, C. Gómez-Rodríguez, and J. Vilares.
   https://doi.org/10.3390/electronics10111348
2. Create a summary of the text below, include a quotation (with quotation marks!), an intext citation and a ACM-format reference of the article at the end.
3. Submit your homework on Blackboard as a word or PDF document:

Add your name and student ID to this file name before submitting

> The recent rise in the spread and social influence of fake news, driven by the popularization of social networks, has motivated a surge of interest in their automated detection.
> Since fake news tends to be written with the intent of conveying strong sentiments towards a given subject, sentiment analysis* has proven to be a useful tool in the fake news detection toolbox, both when applied to news items themselves and to related information such as user comments.
> In this article, we reviewed the field of fake news detection from the specific point of view of how sentiment analysis is being used to tackle the problem. We have seen that it has been proven useful in a diverse range of systems, both as a core component or as a source of auxiliary features. Direct comparison between systems and approaches is so far difficult due to the wide range of data sets used, many of them ad hoc, but this problem is on track to being solved with the recent appearance of publicly available data sets and shared tasks.
> Thus, we can say that the research field of fake news detection (and in turn, the application of sentiment analysis for this purpose) is currently in its transition from infancy to maturity. In this stage, the most pressing challenges in our view involve the need to guarantee the fairness, accountability, and transparency of systems (ensuring that results are explainable and free from harmful biases); the support for multilingualism and multimedia content; and the detection of fake news generated by subtly modifying authentic stories or by using text-generation algorithms.

* Sentiment Analysis: the part of text analytics in charge of determining the polarity and strength of sentiments expressed in a text, to be used in fake news detection approaches, either as a basis of the system or as a complementary element.

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Write under this line

Summary

The article "Sentiment Analysis for Fake News Detection"

Social media platforms have worsened the growth of fake news, something that has made people to realize the existence of automating detecting techniques. One useful approach is sentiment analysis which exploits the strong emotions often accompanying false news and its associated information (e.g. user comments). In their paper, Alonso et al. (2021) analyze how it can be used as a main or secondary module in several systems for identifying fake news, thereby indicating its efficacy in both situations. They admit that comparing different systems is challenging because of broad datasets; however, with new open access data sets and shared tasks on this matter, this problem will be addressed soon enough. Discipline growth would mean addressing such issues as maintaining openness, accountability and fairness; supporting multilingual and multimedia content and identifying well-constructed fake news items or generated by text algorithms. It is stated in their findings that "the research field of fake news detection (and in turn, the application of sentiment analysis for this purpose) is currently in its transition from infancy to maturity" (Alonso et al., 2021).

Quotation.

"The research field of fake news detection (and in turn, the application of sentiment analysis for this purpose) is currently in its transition from infancy to maturity" (Alonso et al., 2021).

In-text Citation

(Alonso et al., 2021)

ACM-format Reference

Reference: M.A. Alonso, D. Vilares, C. Gómez-Rodríguez, and J. Vilares, *Electronics*, vol. 10, no. 11, p. 1348, 2021. Available: https://doi.org/10.3390/electronics10111348