Fake news detection using NLP In AI Technology:

The way news is created and disseminated has altered in tandem with the growth of the Internet and the creation and broad adoption of the social media idea. Thanks to social media, news is now more readily available, quicker, and less expensive. There are certain drawbacks to this modification as well. Particularly, misleading content is become riskier—fake news created by users of social media, for example. Despite only being discussed recently, the issue of false news has grown in importance as a research topic because of social media's high content. Writing fake comments and news on social media is easy for users. The main challenge is to determine the difference between real and fake news. In this paper, a two-step method for identifying fake news on social media has been proposed, focusing on fake news. In the first step of the method, a number of pre-processing is applied to the data set to convert un-structured data sets into the structured data set. Using the resulting TF weighting method and Document-Term Matrix, the texts in the news-containing data set are represented by vectors. In the second stage, the data set that was converted into a structured format using text mining techniques has twenty-three supervised artificial intelligence algorithms implemented in it. In this study, twenty-three intelligent classification approaches were experimentally evaluated using publicly available data sets. The classification models were then compared using four assessment measures.

Introduction:

The last technological developments and the spread of the Internet have caused an enormous impact on social interactions. Social media has become an increasingly popular way of obtaining information for people. Additionally, people share their personal activities, interests, and opinions on different social media platforms. Social media provides many advantages such as easy access to information, low cost, and rapid spread of information. Owing to these advantages, many people tend to search for news from social media rather than classical news sources such as television or newspaper. Consequently, social media news is quickly replacing classical news sources. Although social media has many advantages, news on online social media is not qualified when compared the classical news sources. Nevertheless, sometimes the contents of social media may be changed to achieve different goals. These websites may be seen in Macedonia, Romania, Russia, United States, United Kingdom, and many other countries .For this reason, fake news and rumors spread very quickly and broadly .This situation leads to the

production and propagation of the news articles which are inaccurate. In addition, without careful checking, fake news and misinformation are spread by well-meaning users. In social media, there are many websites that aim to produce only fake news.

Reviews, opinions, and news on social media have been playing an important role in the decisions of users. The spread of low-quality news, namely fake news, have a negative effect on opinions of society and individual. Fake news is not only harmful to individuals and society, but also to businesses and governments. For instance, fake news about the organization, which are emitted by spam or malicious users, can cause considerable damage. Therefore, fake news detection has become a significant research area.

In this study, a detection model containing two different steps has been proposed to detect fake news in social media. The proposed model is an approach that combines methods of text analysis and supervised artificial intelligence algorithms. In the first step of this work, text mining methods have been applied to the online news data set. The aim of text analysis methods and techniques is to obtain structured data from an unstructured news article. There are individual studies about using only one or two of the supervised algorithms in the literature. Furthermore, they are tested within limited data sets. Unlike other individual studies, the problem of fake and false news detection has been handled and modeled as a classification problem and twenty-three supervised artificial intelligence algorithms have been adapted for the first time to fake and false news detection problem in three real data sets in this study.

The outline of the paper is organized as follows. Previous works performed in the field of fake news detection has been briefly described in Section 2. Details of the proposed model, supervised artificial intelligence algorithms, text mining steps, and performance evaluation metrics have been described in Section 3. Section 4 describes data sets and experimental results obtained from twenty-three supervised artificial intelligence algorithms for three different data sets. Section 5 presents a discussion of the results obtained from the current work. Conclusions and future research directions have been discussed in Section 6.