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Fake News Detection Using Machine Learning

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ABSTRACT: Social media for news consumption is a double-edged sword. On the one hand, its low cost, easy access, and rapid dissemination of information lead people to seek out and consume news from social media. On the other hand, it enables the wide spread of “fake news”, i.e., low quality news with intentionally false information. The extensive spread of fake news has the potential for extremely negative impacts on individuals and society. Therefore, fake news detection on social media has recently become an emerging research that is attracting tremendous attention. Fake news detection on social media presents unique characteristics and challenges that make existing detection algorithms from traditional news media ineffective or not applicable. First, fake news is intentionally written to mislead readers to believe false information, which makes it difficult and nontrivial to detect based on news content; therefore, we need to include auxiliary information, such as user social engagements on social media, to help make a determination. Second, exploiting this auxiliary information is challenging in and of itself as users’ social engagements with fake news produce data that is big, incomplete, unstructured, and noisy. Because the issue of fake news detection on social media is both challenging and relevant, we conducted this survey to further facilitate research on the problem. In this survey, we present a comprehensive review of detecting fake news on social media, including fake news characterizations on psychology and social theories, existing algorithms from a data mining perspective, evaluation metrics and representative datasets. We also discuss related research areas, open problems, and future research directions for fake news detection on social media.

I. INTRODUCTION

As an increasing amount of our lives is spent interacting online through social media platforms, more and more people tend to seek out and consume news from social media rather than traditional news organizations. The reasons for this change in consumption behaviours are inherent in the nature of these social media platforms: it is often more timely and less expensive to consume news on social media compared with traditional news media, such as newspapers or television; and it is easier to further share, comment on, and discuss the news with friends or other readers on social media. It was estimated that over 1 million tweets are related to fake news «Pizzagate»³ by the end of the presidential election. Given the prevalence of this new phenomenon, «Fake news» was even named the word of the year by the Macquarie dictionary in 2016. Second, fake news intentionally persuades consumers to accept biased or false beliefs. Fake news is usually manipulated by propagandists to convey political messages or influence. For example, some report shows that Russia has created fake accounts and social bots to spread false stories⁵. Third, fake news changes the way people interpret and respond to real news.

II. RELATED WORK

2.1 Social Media and Fake News Social media includes websites and programs that are devoted to forums, social websites, micro blogging, social bookmarking and wikis [1][2]. On the other side, some researchers consider the fake news as a result of accidental issues such as educational shock or unwitting actions like what happened in Nepal Earthquake case [3][4]. In 2020, there was widespread fake news concerning health that had exposed global health at risk. The WHO released a warning during early February 2020 that the COVID-19 outbreak has caused massive ‘infodemic’, or a spurt of real and fake news—which included lots of misinformation.

2.3 Data Mining Data mining techniques are categorized into two main methods, which is; supervised and unsupervised. The supervised method utilizes the training information in order to foresee the hidden activities. Unsupervised Data Mining is a try to recognize hidden data models provided without providing training data for example, pairs of input labels and categories. A model example for unsupervised data mining is aggregate mines and a syndicate base.

2.4 Machine Learning (ML) Classification Machine Learning (ML) is a class of algorithms that help software systems achieve more accurate results without having to reprogram them directly. Data scientists characterize changes or characteristics that the model needs to analyse and utilize to develop predictions. When the training is completed, the



algorithm splits the learned levels into new data. There are six algorithms that are adopted in this paper for classifying the fake news.

III. METHODOLOGY

In this paper, we have used Python and its Sci-kit libraries. Python has a huge set of libraries and extensions, which can be easily used in Machine Learning. Sci-Kit Learn library is the best source for machine learning algorithms where nearly all types of machine learning algorithms are readily available for Python, thus easy and quick evaluation of ML algorithms is possible.

IV. EXPERIMENTAL RESULTS

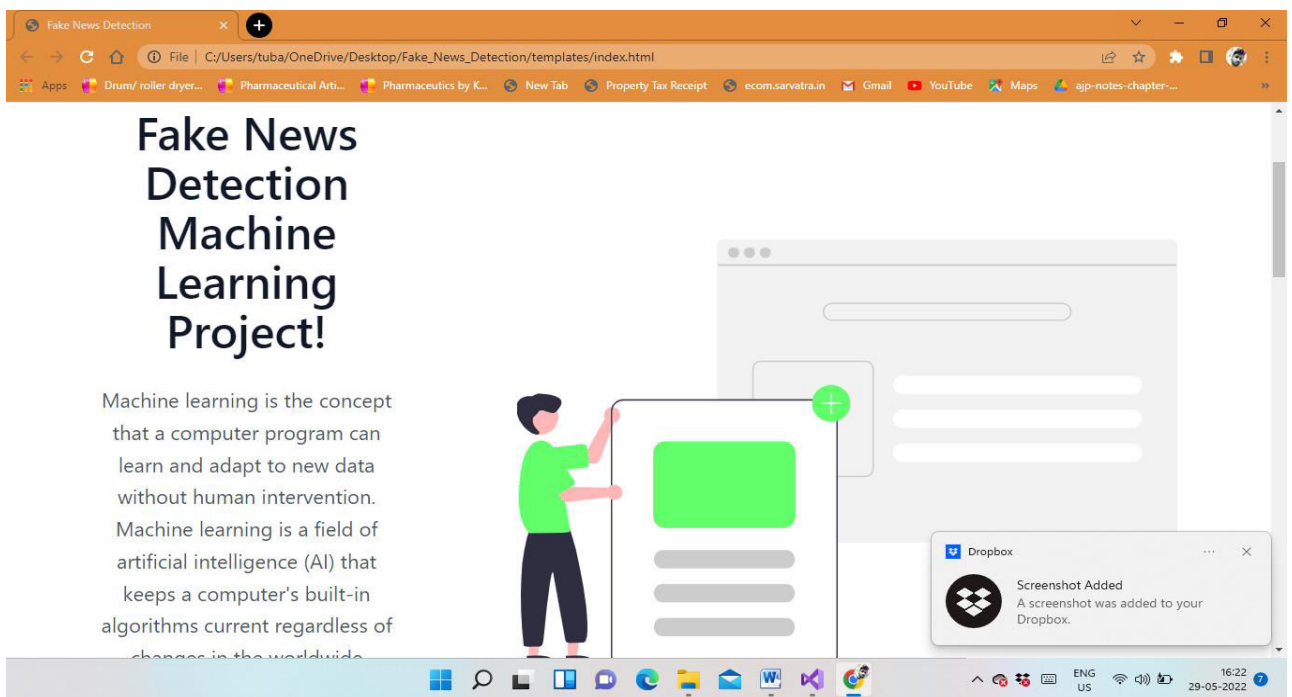


Figure 1 : INDEX PAGE

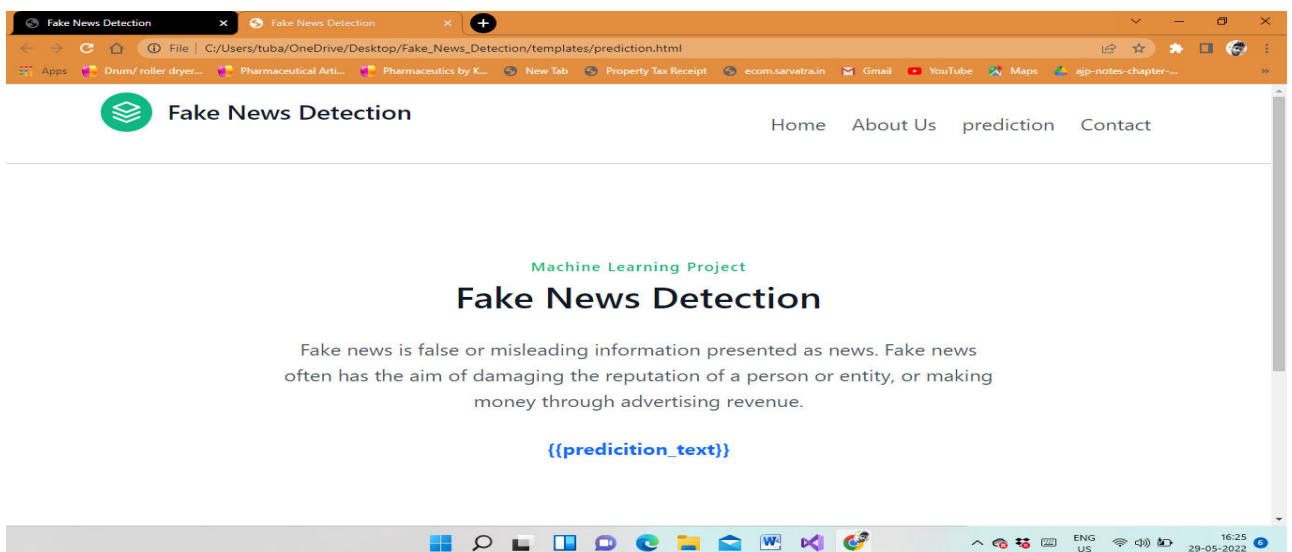


Figure 2 : PREDICTION PAGE



V. CONCLUSION

With the increasing popularity of social media, more and more people consume news from social media instead of traditional news media. In this article, we explored the fake news problem by reviewing existing literature in two phases: characterization and detection. In the detection phase, we reviewed existing fake news detection approaches from a data mining perspective, including feature extraction and model construction.

REFERENCES

1. Shu, Kai, et al. "Fakenewsnet: A data repository with news content, social context, and spatiotemporal information for studying fake news on social media." *Big Data* 8.3 (2020): 171–188.
2. <https://www.youtube.com/watch?v=CUkggjNNoWs>
3. <https://www.youtube.com/watch?v=cPIM32s-Y3I>
4. https://www.youtube.com/watch?v=rXd_FOkms80



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