

## Short Paper

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# Hyperpartisan News Classification with ELMo and Bias Feature

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Hyperpartisan news is a kind of news riddled with twisted, untruthful, and often extremely one-sided. This kind of news can spread more successfully than the others. One of the obvious traits of hyperpartisan news content is that it can mimic regular news articles. Most are favour fake news detection algorithms, and there is less research conducted for hyperpartisan news. This research aims to perform classification on the hyperpartisan news using ELMo and bias features. ELMo was used to develop a classification model to perform classification on the BuzzFeed Webis News Corpus dataset. The model uses ELMo embedding with bias word score generated from bias lexicon to train a deep learning model using Tensorflow and Keras. We had compared the final result with two proposed baseline models that utilized ELMo from other research. The discussion section further investigated the contribution of ELMo and bias feature in the hyperpartisan task.

**Keywords:** natural language processing, classification, hyperpartisan, ELMo, bias detection

## 1. INTRODUCTION

In the past, fake and bias news problem inspired various studies in identifying and classifying this kind of news. There has been concern that fake and bias news are misleading the readers. The content on the news can be entirely false or misleading. For better understanding and defining the terms, we can loosely classify the contents. The contents that solely misleading and fabricated are known as fake news. Fake news mimics news and mainly aims to deceive the reader. Another form of content is hyperpartisan news, which is biased or misleading and usually covers actual events or incidents. Fake news content can be entirely false, while hyperpartisan news can be a mixture of true and false. However, according to [1], hyperpartisan news is a kind of news riddled with twisted, untruthful, and often extremely one-sided. This kind of news can spread more successfully than the others. Currently, there is less research conducted for hyperpartisan news. [2] claims that fake news detection is still in its infancy stage, and a near real-time reaction is crucial. Hyperpartisan contents can lead to polarization within a community because it is typically used to manipulate propaganda and manipulate readers. When this situation goes to an extreme state, it can cloud readers judgements on making objective decisions. There are

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