Chapter 7
Three Fakes With Deep Learning Techniques Fake News, Fake Reviewers, and Deepfakes:
A Survey

Laor Boongasame

https://orcid.org/0000-0002-4000-4642

Department of Mathematics, Faculty of Science, King Mongkut's Institute of Technology Ladkrabang, Thailand

ABSTRACT

The internet has brought convenience to the world. Many people communicate with each other through social media. Truth and lies are among the conveniences that people enjoy. Fake news and fake reviews cause problems for many people, both physically and mentally. For example, mentally, it may cause misunderstandings. Physically, it may lead to incorrect behavior towards the body, such as eating the wrong food or medicine. As a result, this paper presents a survey of research on various false stories that exist on social media. This paper will focus on three distinct topics: 1) fake news; 2) fake reviews; and 3) deepfakes. All three will be surveys of false stories used in deep learning. Some of the three tasks may contain the same information. At the same time, the theory may consist of multiple parts. Next, this chapter will present it in separate parts, hoping that readers will gain an understanding of fake social media and find it useful for future research.

INTRODUCTION

The internet has brought convenience to the world. Many people communicate with each other through social media. Among the conveniences people receive on social media are both real and fake messages. False information such as fake news and fake reviews cause problems for many people, both physically and mentally. For example, mentally it may cause misunderstandings. Physically, it may lead to wrong behavior towards the body, such as eating the wrong food or medicine. There is a lot of research on fake messages on social media. However, there are three widely researched fake messages issues: fake news, fake reviews, and deepfakes. This chapter also discusses the deep learning techniques used in such research. It will give the reader an idea of how deep learning techniques solve the problem of detecting fake news, fake reviews, and deepfakes and the ongoing research situation relating to the investigation of fake news, fake reviews, and deepfakes.

1. IMPACT OF FALSE INFORMATION ON SOCIAL MEDIA

The effects of false information are multifaceted. Each technique is different, whether it is fake news, fake reviews, or deep fakes. Below, we explain each type's specifics and effects in detail.

1.1 Impact Of Sharing Fake News on Social Media

A fake news is "a news article that is intentionally and verifiably false" Fake news often spreads quickly. Gupta's research (Gupta et al., 2013) studied the spread of 8 fake images on Twitter during Hurricane Sandy and it was found that such fake images were shared almost twice as often as real images. The impact of sharing fake news on social media. There are huge health, financial and political impacts.

Health Effects

Many studies have addressed this issue.

- WHO (2020) noted that there has been a large amount of distorted health information spread on social media during the outbreak of COVID-19. They make people misunderstand.
- According to Al-Zaman's research (Al-Zaman, 2020), misunderstanding about health has caused emerging nations to face a health catastrophe. This is a result of these nations' lack of resources to address such information.

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