# Detecting Online Fake News by Considering Stance of Headline+Body+Text on Online News Article

##### **Vicky Kumar Prasad, Umesh Saraswat, Professor Priyanka Meel**

Department of Information Technology

Delhi Technological University(Formerly Delhi College of Engineering), Delhi – 110042 , India

***Abstract*-** Due to the increasing popularity of online social networks, fake news for various commercial and political purposes has been appearing in large numbers and widespread in the online world. It has adversely affected both online social network systems as well as offline communities and

conversations. An important goal in improving the trustworthiness of information in online social networks is to identify the fake news regularly. This paper aims at investigating the principles, methodologies and algorithms for detecting fake news articles and title from online social networks as well as news article from daily sources and evaluating the corresponding performance. In order to address this issue we propose a fake news detection of online available news material (texts or title) by building a model that can classify articles into either Fake or Real with high accuracy. A LSTM(Long Short Term Memory) based approach is used to find a latent pattern in the news title as well as in its body(content) so that the text can be classified as the Fake or Real news instance. Finally both title and content can be combined to get a highly accurate news instance detector.

***Index Terms***- Fake news articles, fake news detection, deep learning , LSTM.

1. INTRODUCTION

This article guides a stepwise walkthrough by Experts for writing a successful journal or a research paper starting from inception of ideas till their publications. Research papers are highly recognized in scholar fraternity and form a core part of PhD curriculum. Research scholars publish their research work in leading journals to complete their grades. In addition, the published research work also provides a big weight-age to get admissions in reputed varsity. Now, here we enlist the proven steps to publish the research paper in a journal.

Identify the constructs of a Journal – Essentially a journal consists of five major sections. The number of pages may vary depending upon the topic of research work but generally comprises up to 5 to 7 pages. These are:

1. Abstract
2. Introduction
3. Research Elaborations
4. Results or Finding
5. Conclusions

**In Introduction you can mention the introduction about your research.**

1. IDENTIFY, RESEARCH AND COLLECT IDEA

It's the foremost preliminary step for proceeding with any research work writing. While doing this go through a complete thought process of your Journal subject and research for it's viability by following means:

1. Read already published work in the same field.
2. Goggling on the topic of your research work.
3. Attend conferences, workshops and symposiums on the same fields or on related counterparts.
4. Understand the scientific terms and jargon related to your research work.
5. WRITE DOWN YOUR RESULTS, STUDIES AND FINDINGS

Now it is time to articulate the research work with ideas gathered in above steps by adopting any of below suitable approaches:

## A. Bits and Pieces together

In this approach combine all your researched information in form of a journal or research paper. In this researcher can take the reference of already accomplished work as a starting building block of its paper.

Jump Start

This approach works the best in guidance of fellow researchers. In this the authors continuously receives or asks inputs from their fellows. It enriches the information pool of your paper with expert comments or up gradations. And the researcher feels confident about their work and takes a jump to start the paper writing.

## B. Use of Simulation software

There are numbers of software available which can mimic the process involved in your research work and can produce the possible result. One of such type of software is Matlab. You can readily find M Files related to your research work on internet or in some cases these can require few modifications. Once these Files are uploaded in software, you can get the simulated results of your paper and it eases the process of paper writing.

As by adopting the above practices all major constructs of a research paper can be written and compiled to form a complete research ready for Peer review.

1. CONCLUSION

Existing features-based approaches to news verification on news articles and headlines ignore the very important part of news that is related image with article in news. In this paper, we focus on text articles to improve the verification performance. We find that apart from their popularity and great impact on news diffusion, images also have distinctive distribution patterns for the real and fake news visually and statistically.

The concept of short term memory can be included in the fake image as well to improve the performance. As only using LSTM on text approach will be not as good as combination of CNN in Images and LSTM in text. Different other parameters in the Text dataset can too be involved in order to increase the performance of the Text classifier. The most important future can be that we can build the classifier which combinely classify fake images and text so that our news detector can have more use cases.

REFERENCES

1. Zhiwei Jin, Juan Cao, Yongdong Zhang, Senior Member, IEEE, Jianshe Zhou, and Qi Tian, Fellow, IEEE, “*Novel Visual and Statistical Image Features for Microblogs News Verification*,” IEEE Transactions on Multimedia, VOL. 19, No. 3, March 2017.
2. Jiebo Luo Department of Computer Science University of Rochester, *Multimodal Fusion with Recurrent Neural Networks for Rumor Detection on Microblogs* MM’17, October 23–27, 2017, Mountain View, CA, USA
3. Dhruv Khattar, Jaipal Singh Goud, Manish Gupta, and Vasudeva Varma. 2019. *MVAE: Multimodal Variational Autoencoder for Fake News Detection.* In Proceedings of the 2019 World Wide Web Conference (WWW ’19), May 13–17, 2019, San Francisco, CA, USA. ACM, New York, NY, USA.
4. Hunt Allcott and Matthew Gentzkow. 2017. Social Media and Fake News in the 2016 Election. 31 (05 2017), 211–236
5. Kai Shu, Amy Sliva, Suhang Wang, Jiliang Tang, and Huan Liu. 2017. Fake news detection on social media: A data mining perspective. ACM SIGKDD Explorations Newsletter 19, 1 (2017), 22–36.
6. J. Z. Pan, S. Pavlova, C. Li, N. Li, Y. Li, and J. Liu, “Content based fake news detection using knowledge graphs,” in International Semantic Web Conference (1), ser. Lecture Notes in Computer Science, vol. 11136. Springer, 2018, pp. 669–683

Authors

**First Author** – Author name, qualifications, associated institute (if any) and email address.

**Second Author** – Author name, qualifications, associated institute (if any) and email address.

**Third Author** – Author name, qualifications, associated institute (if any) and email address.

**Correspondence Author** – Author name, email address, alternate email address (if any), contact number.