

# Figuring out Fast Journalism Trend via Text Mining Based on Deep Transfer Learning

Yunho Maeng(yunhomaeng@yonsei.ac.kr), Choong C. Lee, JaeYoung An

Graduate School of Information, Yonsei University

## Abstract

There is no guilty to fake news. It's just user preference like fast food. In the online mass media era, researchers found that some media have generated fake news to increase their web traffic to earn the advertisement revenue. They pointed out the media is a problem. However, our observation is a little bit different. If the problem were caused by user preference, we need to focus on the user, not for media. Thus, the target goals of this study are finding user preference of online news media beyond fake news and showing how the trend is moving forward among generations.

Fast journalism in this study means that the user of online media tends to prefer reading a preview of news not for its main contents. We trying to figure out fast journalism trend via text mining based on deep transfer learning. Text mining is a data-driven approach to show how much fast journalism has widely spread on social media with deep neural network analysis like an OpenAI GPT, BERT as a natural language processing. We will calculate the cost distance of deep transfer learning among 'title', 'reply', 'content' of news

We expect that our research will show how people consume and prefer online media news beyond fake news phenomenon. Near the future, the result of this study would be used in online media company to transform their methodology of digital contents delivering to next generation.

**Keywords:** *fast journalism, fake news, text mining, GPT, BERT, news analysis, digital media*

## References

- [ 1 ] Radford, A., Narasimhan, K., Salimans, T., & Sutskever, I. (2018). Improving language understanding by generative pre-training. URL <https://S3-Us-West-2.Amazonaws.Com/Openai-Assets/ResearchCovers/Languageunsupervised/Language Understanding Paper. Pdf>.
- [ 2 ] Devlin, J., Chang, M.-W., Lee, K., & Toutanova, K. (2018). Bert: Pre-training of deep bidirectional transformers for language understanding. ArXiv Preprint ArXiv:1810.04805.
- [ 3 ] Adhikari, A., Ram, A., Tang, R., & Lin, J. (2019). DocBERT: BERT for Document Classification. arXiv preprint arXiv:1904.08398.
- [ 4 ] Jin, O., Liu, N. N., Zhao, K., Yu, Y., & Yang, Q. (2011, October). Transferring topical knowledge from auxiliary long texts for short text clustering. In Proceedings of the 20th ACM international conference on Information and knowledge management (pp. 775-784). ACM.
- [ 5 ] Neculoiu, P., Versteegh, M., & Rotaru, M. (2016). Learning text similarity with siamese recurrent networks. In Proceedings of the 1st Workshop on Representation Learning for NLP (pp. 148-157).

## Biography

Yunho Maeng: Ph.D. Student in Business Analytics, Graduate School of Information, Yonsei University

Choong C. Lee: Professor, Graduate School of Information, Yonsei University

JaeYoung An: Ph.D. Student in Business Analytics, Graduate school of Information Yonsei University