FAKENET: FAKE NEWS IMAGE DETECTION

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Abstract

The internet has become a primary source of information for most of its users. While this may come with its advantages and disadvantages. One such disadvantage is the existence of false news or Fake news. While manual fact-checkers are used to combat fake news, they are not as scalable as automated systems. Fake news has spread far and wide and has long reaching consequences in present day society worldwide, Images which are included in news stories are eleven times more likely to be shared compared to ones that are not. Existing research has identified image manipulation and native emotion within images to be factors of an image being a fake news image.

The research introduces a more accurate fake news image detection system, while the current systems have sound accuracy, the tests conducted in ablation studies show that the image manipulation performs poorly when tried on previous systems. The research combines deep learning and transfer learning in order to bring about a more accurate system to previous systems.

This research pursued a novel method of classifying fake news images with the usage of deep learning and transfer learning, the model utilises is a ResNet101 model, through this the model has been previously trained on the ImageNet database which consists of over fourteen million images, this enables the have a significant edge in terms of accuracy when classifying images. However, that alone is not a determining factor as the residual blocks in the ResNet achieves an accuracy of 86.9% which enables it to have higher accuracy to previous systems by 2.3%.

Keywords: Fake News, Image Classification, Fake News Detection, Deep Learning

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