

**Abstract-** News about Covid-19 has continued to be publicized to educate the public since Covid-19 was discovered for the first time in 2019. Social media has an important role in spreading this news. One of them is Twitter. Twitter is a trusted medians of exchanging news and information about Covid-19. The speed of this news exchange causes some of the news that is spread to be unreliable consequently a lot of fake news about Covid-19 is also being spread. Therefore, a Covid-19 fake news detector is needed. The system for detecting Covid-19 fake news has also been widely researched. The popular deep learning approach such as BERT offers high accuracy in detecting fake news. This research use BERT to detect Covid-19 fake news by adding a text data augmentation process. The three augmentation processes used are acronym-based, spelling-check-based and typo-based. With a comprehensive vetting process based on 5-fold cross-validation using eleven thousand Twitter posts with 4 metric evaluations; Accuracy, Precision, Recall and F1-Score. The test results show that data augmentation can improve BERT's performance in detecting Covid-19 fake news.

**Keywords:** fake news, covid-19, twitter, data augmentation, BERT.