Paper Title:
Depression Screening in Humans With AI and Deep Learning Techniques

Paper Link: https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=9904737

1 Summary

1.1 Motivation

Current depression detection systems stumble to interpret social signals that indicate an individual's true mood and behavior. The unsatisfactory performance of previous models necessitates the development of a more efficient model. The authors' aim is to improve the identification of depressed individuals on social media platforms.

1.2 Contribution

The authors' propose a comprehensive AI model using Word2Vec and TF-IDF features with CNN and LSTM for a concentrated and effective depression detection across online platforms.

1.3 Methodology

Various preprocessing steps on the dataset and feature engineering such as applying word embeddings, TF-IDF, etc. were used. A hybrid LSTM-CNN system was used for detection depression from text data.

1.3 Conclusion

The hybrid LSTM-CNN model along with the feature representations performed remarkably for the task with a high accuracy of 99.02%.

2 Limitations

2.1 First Limitation

The study is limited to English language only, which can be extended to other languages later.

2.2 Second Limitation

The model should have been evaluated across multiple datasets for better understanding of its capability.

3 Synthesis

This work can be extended to multiple languages which would be highly beneficial in detecting depression in a greater community and take effective steps in helping people in time.