Depression Classification Through Natural Language Processing of Social Networking Sites (SNS) Data

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Introduction

Depression is a widespread mental disorder affecting people globally, with notable disparities across different genders and regions. Recognizing the value of digital platforms in early detection, the aim of this project is to predict signs of user-generated depressive posts on SNS, enhancing the detection of mental health issues in digital communication spaces. With the implementation of NLP, the researcher leverages advanced models and extensive SNS data to address this critical health concern effectively.

Objective

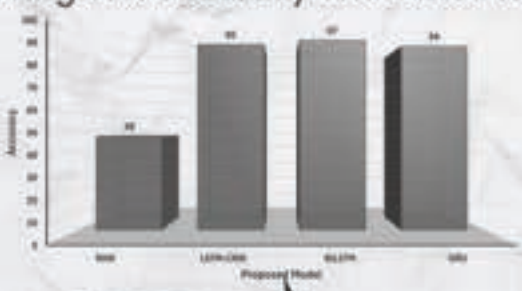
- To generate a dataset by collecting 30,000 user-generated depressive and non-depressive posts from various social networking sites.
- To perform a hybrid approach for data labelling that integrates manual labelling and transfer learning.
- To implement and evaluate four deep learning models
- To deploy the most effective model with at least 80% predictive accuracy into a web application.

Problems

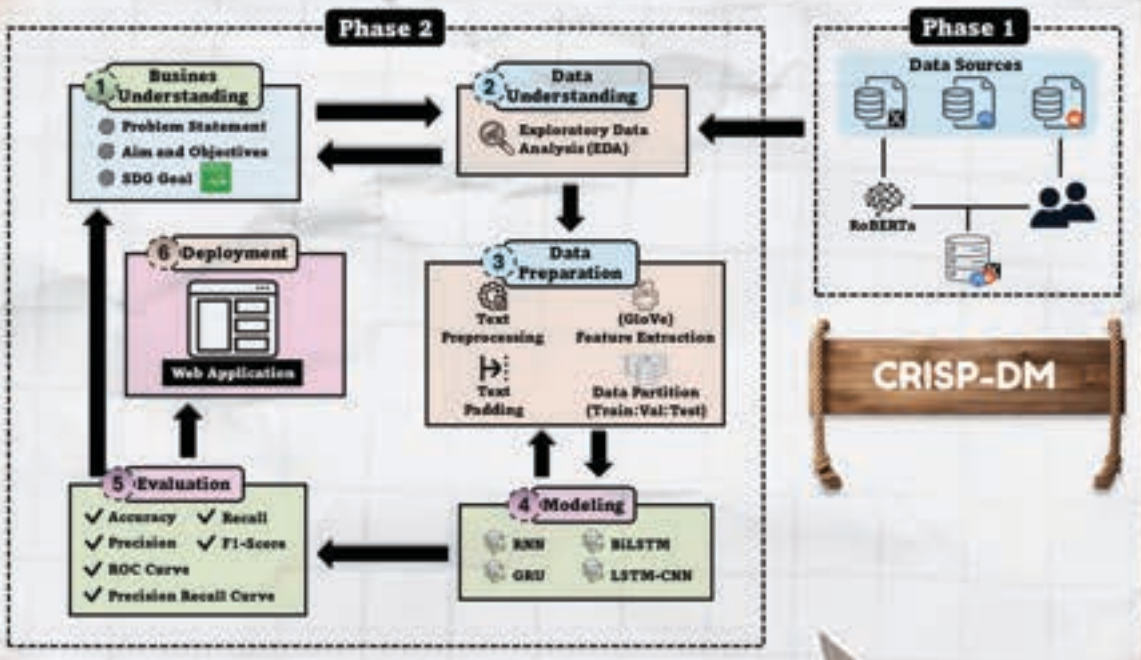
- Social Stigma of Depression
- Interpretative Challenges of Nuanced Language

Conclusion

BiLSTM model was chosen as the best model, achieving 97% accuracy and 0.2184 loss.



Methodology



Solution