

**University Teknologi MARA**

**Early Detection of Anxiety in  
Social Media Using  
Convolution Neural Network**

**Mohd Tharwan Hadi Bin Ruslan**

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## ABSTRACT

With pandemic covid-19 getting worse and most people need to be stayed at home, will surely make rate of mental health conditioner to be increased. Mental health shouldn't be taken lightly since the sole reason of suicide come from underlying mental health problems. But since most people need to stay at home, then by no mean detecting mental health patient will be difficult. So, the only way left to detect anxiety patients is through online or specifically social media. Since anxiety is the leading condition among all mental health condition, beating depression even, then this project will focus on detecting anxiety patient through Twitter tweets. The reason why this project will use social media Twitter to detect anxiety is because these anxiety conditioners sometime will post that they having anxiety or nearly having anxiety on social media. So this project aim to detect anxiety early through social media Twitter. This project surely be able to help the society, by giving mental health facility the capability to detect anxiety patient through Twitter, contact them early, and giving them early treatments. The system will get the data from the user, which in this case is mental health staff, and then decide whether the data received is positive anxiety or not. This project will consist of literature study, data collection, data analysis, data cleaning, user interface design and classifier design. From literature study, the CNN algorithm had been chosen for this project, since CNN algorithm proof to be the best algorithm for classifying anxiety patients. Twitter API and tweepy will be used for data collection and textblob for sentiment analysis. Then there will be a lot of preprocess step to clean the data. As for the classifier design, the keras function will be used to generate CNN classifier. And python GUI for user interface. Model and system evaluation are also done for the project, proof that the classifier and user interface able to function as intended. In conclusion, this project may help decreasing the mental health patients, hence decrease the suicide rate.

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