

ABSTRACT

Natural Language Processing and Support Vector Machine Based Discord Bot on Emotion Detection For Messenger Applications

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Messenger application is a crucial part of our life. It is a vital part of day-to-day communication. It's been used from important notifications and meetings to mundane conversation about the weather. Some of the notable ones are WhatsApp Messenger, Line, and Discord. With 5 billion, 500 million, and 100 million users respectively. Discord is extremely popular with the younger generation as it is specifically made for gaming and youth. These demographics are the most likely to experience depression and radicalisation which makes them the focus of this project.

The goal of this project is to create a tool to help with the mental health of the young people in discord by detecting their emotions from their messages and when necessary, sending them resources that they might need. To achieve this goal, a bot is created that can process the messages from the users in a discord server. The bot will then process the text, then feeds into an SVMsentiment analysis algorithm which will classify its emotion. After that it is saved into a database. At the start of each week, the bot will then evaluate their emotions and if it passes a certain threshold, the bot will send them online resources that can help them deal with their emotions.

The result is a robust system that can predict a person's accuracy based on their chatting behaviour in a week at about 85% accuracy. The system can also detect irregularity in a person's chatting behaviour such as typos and acronym and read them accordingly. It can also analyse a person's emotional state, compare it to their past record and send help resources when needed, all from their chatting behaviour.

Keywords : *Messenger application, text processing, support vector machine, natural language processing ,mental health.*