The design of knowledge-based sentiment analysis to detect depression based on youths' song listening behaviour: a preliminary study

## ABSTRACT

Depression has become one of the significant social issues that have arisen in society. According to the World Health Organization (WHO), depression is now a common mental disorder affecting 264 million people worldwide. Depression can cause disability around the world and contributes significantly to the global burden of disease. There are several ways to treat depression, and most of them are related emotionally. Music therapy has been widely encouraged as an effective treatment for depression and anxiety. This is because music has always been a way to attach sentimentally to human feelings. Many studies have been carried out to show how songs can help treat depression, but there are no clear studies that show how songs can indicate or detect depression. This study aims to analyse the sentiments of songs users listen to and monitor their mood for fourteen days consecutively to detect depressive mood using a knowledge-based depression detector. An inspirational message to calm the user will be displayed if depression is detected to avoid a severe level. The design and implementation of the software are tested by two academic staff and is found to be correctly developed, and the functionalities are as intended in the specifications and design.

**Keyword:** Sentiment analysis; Depression detector; Mental health; Music therapy; Mood; Natural language