

## Abstract

Happiness index is an indicator which describes the level of happiness of a country. In a smaller scale these indicator can be used for measuring the happiness index of a city . Bandung city government is currently developing a system to measure the happiness index of their citizen. Happiness index measurement are using some parameters that can make Bandung citizen be happy. People often express what they are thinking on their mind through social media. This study proposes a system to measure the happiness index using existing data in social media then calculated in accordance with the parameters that has been declared.

This study will be divided into several stages. The first phase is crawling of data from social media twitter with crawling area only in Bandung city. The second stage is the process of *text processing* to get the clean data tweet. The third stage is to create ontology that used for the basis for the tweet classification using the parameters of happiness index. The fourth stage is to classify tweets using ontologies that have been made in the previous stage. The fifth stage is the sentiment classification from the outcome data of ontology classification has been done. The last stage is to calculate the happiness index from the sentiment classification results.

The output of this research is the happiness index value of the Bandung city. Happiness index obtained in this study was 58%. The results of this study can be used as an alternative calculation happiness index Bandung besides happiness index manual calculations.

Keyword : Happiness Index, Ontology, Sentiment Analysis, Twitter, Data Crawling