

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
UNIVERSITY COLLEGE OF ENGINEERING KAKINADA
KAKINADA, ANDHRA PRADESH, 533003

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Domain: Machine Learning

Title: Short Text Emotion Detection using Multiclass SVM

Abstract:

Emotions hold significance during the interaction process between humans and machine communication systems. Emotion detection enhances the feedback mechanism actions taken by computers from the users. Emotions are expressed as joy, sadness, anger, surprise, hate, fear. Recognizing this type of emotion from a text written by a person plays an important role in applications such as chatbots, customer support forum, customer reviews.

Existing Machine Learning shows the less accuracy misclassification rate occurs. the time cost of estimating parameters is high due to the large-scale term groups and the sampling algorithm.

SVM scales relatively well to high dimensional data. Multiclass Support Vector Machine, which can be used for classification problems with multiple classes. Using Support Vector Machine multiclass classifier classifies the emotions based on the frequency of words related to the emotions. SVM groups and draws hyperplane between emotion classes based on the emotion words. The short text message which near to the emotion class is assigned it respective emotion.

For detecting emotions from the text, perform a few steps that will start with preparing the data. Then the next step will be tokenization where the textual data will be converted into tokens and from these tokens, we have to identify the emotional words. These emotional words will be the keyword to classify the emotions of a text. Next, we'll frame this task in such a way that a text will be taken as an input and the emoji that represents the emotions in that text is generated as the output.

Signature of the student

Signature of the supervisor