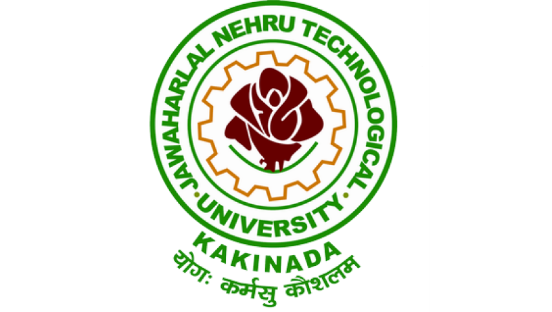
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

UNIVERSITY COLLEGE OF ENGINEERING KAKINADA

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**Domain:** Machine Learning

**Title:** Short Text Emotion Detection using Multi-class SVM

**Abstract:**

Emotions capture the essence of the communication process between people and electronic communication systems. Detecting Emotions such as joy, anger, sadness, fear, and the like improves the computer-generated response process for users. Recognizing this type of emotion from a human-made text plays a vital role in applications such as chat conversations, customer support forums, customer reviews, and studying a user's psychology.

Emotion detection is a multi-class classification problem. Here, the sentence may contain the co-occurrence of words related to more than one emotion; hence, classification is challenging. The existing system uses sampling algorithms to deal with multi-class data. However, it affects the time complexity of the system. We found SVM has a better solution to deal with multi-class data. Support Vector Machine (SVM) scales relatively well on multi-class data. We apply the vectorization process to convert text data into numerical feature vectors for training our SVM model. In the proposed system, our objective is to map the short text statement to a specific emotion.

Signature of the student Signature of the supervisor

AVV. Sai Raju Smt. SSSN Usha Devi N

18021F0025 Assistant Professor

MCA Department of CSE