# Abstract

Sentiment analysis is the statistical study of thoughts, feelings, behavior and emotions of people expressed on written language. The growing amount of Nepali content on the web has opened doors for a range of Natural Language Processing applications from Sentiment Analysis to research and development. This research examines one of the most commonly used machine learning technique notably Support Vector Machine (SVM), for the sentiment analysis of Nepali text. A self-created Nepali data sets gathered by crawling different national news portals online and twitter, are used to experiment with the method. TF-IDF related features are extracted to train and check the models from the pre-processed documents.

Keywords: Natural Language Processing, TF-IDF, Machine Learning, Sentiment Analysis, Support Vector Machine

# Introduction

## Sentiment Analysis

Sentiment Analysis (or opinion mining) is defined as the task of finding authors views on particular entities [1].Sentiment analysis is viewed as a classification function, since it classifies either positive or negative orientation of a text. Machine learning is one of the widely used approaches to classifying sentiment as well as lexicon based methods and linguistic methods [4].Analysis of sentiment was applied to broader research fields, including consumer product reviews and services[1][5].

## Support Vector Machine

Support Vector machine is based on the statistical learning theory proposed by Vapnik et al. It is a new learning system, which is based on a limited number of samples of the knowledge found in the current training text to achieve the best results in classification.

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