Paper Title:
Sentiment Analysis of Tweets using Unsupervised Learning Techniques and the K-Means Algorithm

Paper Link:
https://repositorio.uwiener.edu.pe/bitstream/handle/20.500.13053/7150/Paper_69-Sentiment_Analysis_of_Tweets_using_Unsupervised_Learning_Techniques.pdf?sequence=1

1 Summary

1.1 Motivation

The motivation was to analyse the sentiments of Twitter users regarding Peru's pension funds (AFPs) to help AFPs make better decisions based on public perceptions.

1.2 Contribution

The paper presented a machine learning approach using unsupervised learning and K-means clustering for sentiment analysis of AFP tweets. It identified predominant negative sentiments.

1.3 Methodology

Tweets were collected, cleaned, tokenized, and lemmatised. Exploratory analysis identified frequent terms. Sentiments were classified using a dictionary. K-means clustering determined clusters.

1.4 Conclusion

74% of tweets were negative towards AFPs, indicating disapproval of AFP actions. Unsupervised learning and K-means were effective for sentiment analysis where input/output tags were unavailable.

2 Limitations

2.1 Attribute Mapping

Attribute mappings may have affected classification results.

2.2 Sample Size

The sample only covered one month of tweets. A larger sample could have reduced variability.

3 Synthesis

The methodology can be applied to other domains for sentiment analysis without tags. Clustering rules classified sentiments effectively. The perceived negative sentiments can guide AFP decisions.