

Document Classification: 20 Newsgroup

INT3406 21 - Group 3

Group 3

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Abstract

Your abstract should motivate the problem, describe your goals, and highlight your main findings. Given that your project is still in progress, it is okay if your findings are what you are still working on.

1 Introduction

- 1.1 abstract
- 1.2 abstract

2 Preprocessing

- 2.1 Lowercasing
- 2.2 Map different word to canonical form
 - 2.2.1 Stemming
 - 2.2.2 Lemmatization
- 2.3 Stop word
- 2.4 Noise removal
- 2.5 Summary

3 Feature Extraction

- 3.1 Bag of Word (BoW)
 - 3.1.1 Brief Explanation
 - 3.1.2 Algorithm
 - 3.1.3 Implementation
 - 3.1.4 Discussion
- 3.2 Term Frequency – Inverse Document Frequency (TF – IDF)
 - 3.2.1 Brief Explanation
 - 3.2.2 Algorithm
 - 3.2.3 Implementation
 - 3.2.4 Discussion
- 3.3 Word Embedding
 - 3.3.1 Brief Explanation
 - 3.3.2 Algorithm
 - 3.3.3 Implementation
 - 3.3.4 Discussion

4 Classification

4.1 Linear Model

- 4.1.1 Naive Bayes
- 4.1.2 Logistic Regression (LR)
- 4.1.3 Ridge Classification
- 4.1.4 Perceptron
- 4.1.5 Passive-Aggressive

4.2 Non-parametric

- 4.2.1 K-nearest neighbor (KNN)
- 4.2.2 Support Vector Machine (SVM)
- 4.2.3 Linear Support Vector Machine (LinearSVC)

4.3 Tree-based Classifiers

- 4.3.1 K-nearest neighbor (KNN)
- 4.3.2 Support Vector Machine (SVM)
- 4.3.3 Linear Support Vector Machine (LinearSVC)

4.4 Graphical Classification

- 4.4.1 Conditional Random Fields (CRFs)
- 4.4.2 ...

4.5 Neural Network

5 Summary

Abstract

References