

IDENTIFYING SPAM TEXTS

Introduction

In the digital age, spam texts have become a prevalent issue, cluttering communication channels and posing security risks. This report outlines an approach to identify spam texts using basic preprocessing steps and a simple classification method.

Problem Statement

The objective is to categorize labeled paragraphs, messages, and emails as spam or not spam, employing techniques that suit a beginner's understanding of machine learning.

Approach

❖ Splitting dataset into test and training sets

- Split data into training and testing sets.

❖ Data Processing

- Convert all text to lowercase to ensure uniformity.
- Tokenize text into words for analysis.
- Making a vocabulary of unique words.

❖ Feature Extraction

- Transform text data into a matrix of word frequencies.
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❖ **Checking for Spam**

- Utilize Multinomial Naive Bayes Algorithm. due to its simplicity and effectiveness for text classification.

❖ **Checking accuracy of Model**

- Evaluate model performance using metrics like accuracy.

Multinomial Naive Bayes Classifier

Multinomial Naive Bayes Classifier is a probabilistic algorithm for text classification. It's suitable for feature vectors representing word frequencies in documents. It models the likelihood of each word occurring in a class and uses Bayes' theorem to calculate the most likely class for a given document.

Code Link

 [Synapse_Task_3.ipynb](#)

Conclusion

The approach outlined presents a systematic methodology for tackling the challenge of identifying spam texts within unlabelled messages. By employing text preprocessing techniques and utilizing a Multinomial Naive Bayes Classifier, I demonstrate a foundational framework for distinguishing spam from legitimate content.