Spam Filter.

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The goal of the assignment was to create a spam filter that would learn from datasets. We wanted to create a Naive Bayes spam filter, but we got something different. Our filter only works well when learned and tested on the same emails. This is our mistake because we misunderstood the assignment.

Nevertheless, the principle of our spam filter will be described below.

We have decided that we will determine whether an email is spam or not only by the body of the email, so we have divided the emails into parts. We also created a list of the words that occur most often so that they are not considered in the classification. We also created a list of the words that occur most often so that they are not considered in the classification. Then we got rid of all unnecessary objects in the emails (e.g., alphanumeric characters, links). After all the changes, we created dictionaries with words that occur only in spam emails and only in normal emails. From these we got a dictionary with words that only occur in spam emails. We used this dictionary as “trigger words”. Then in the test() method we did all the above changes and compared every word in the “trigger words” to every word in the email if there was at least one word from the “trigger words” the email was classified as spam and the loop was forced to stop.

Unfortunately, such a filter only works well and correctly when it is trained and tested on the same on the same data, we realized it too late.

In conclusion, we find this task quite useful and interesting. Thanks to it we have learned to use regular expressions, new libraries (e.g., os, email, re), and work with files.

While working on this assignment the following sources were used:

https://docs.python.org/, https://www.wikipedia.org/, https://stackoverflow.com/