

# E-mail Fraud Detection

PRESENTED BY

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# Problem Statement

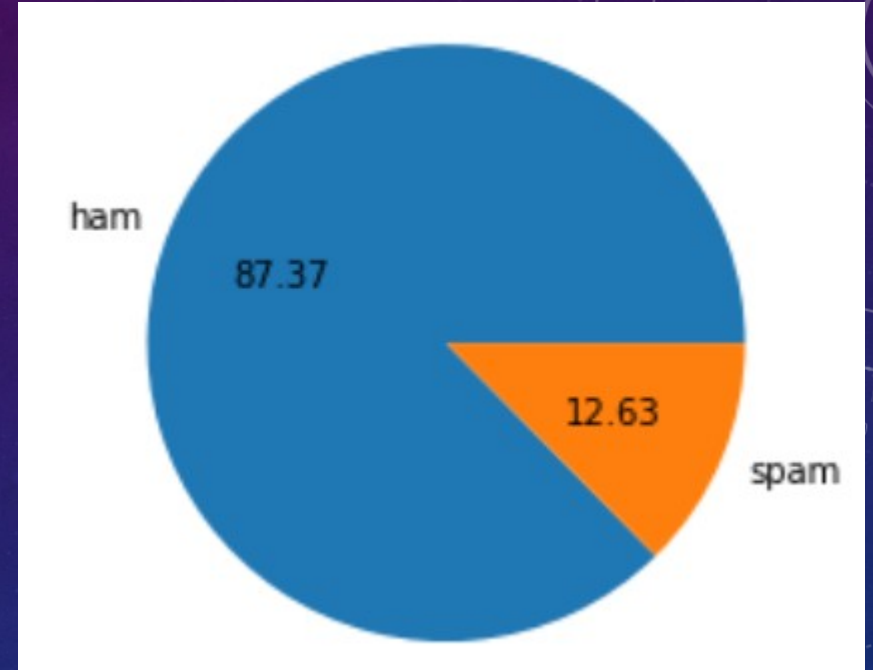
- Unwanted email irritating internet connection.
- Critical e-mail message are missed or delay.
- Identity theft.
- Resulted to untold financial loss to many users who have fallen victim of internet scams





# Project Overview

- To give knowledge to the user about the false e-mails and relevant e-mails.
- It's also work to identify Mobile SMS.
- To classify that mail spam or not.



# Who is experiencing the Problem and how they are impacted

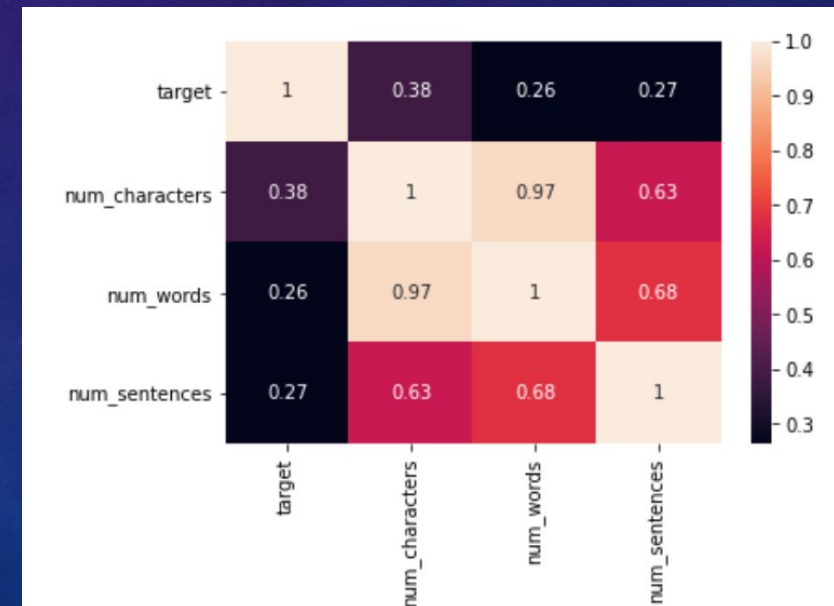
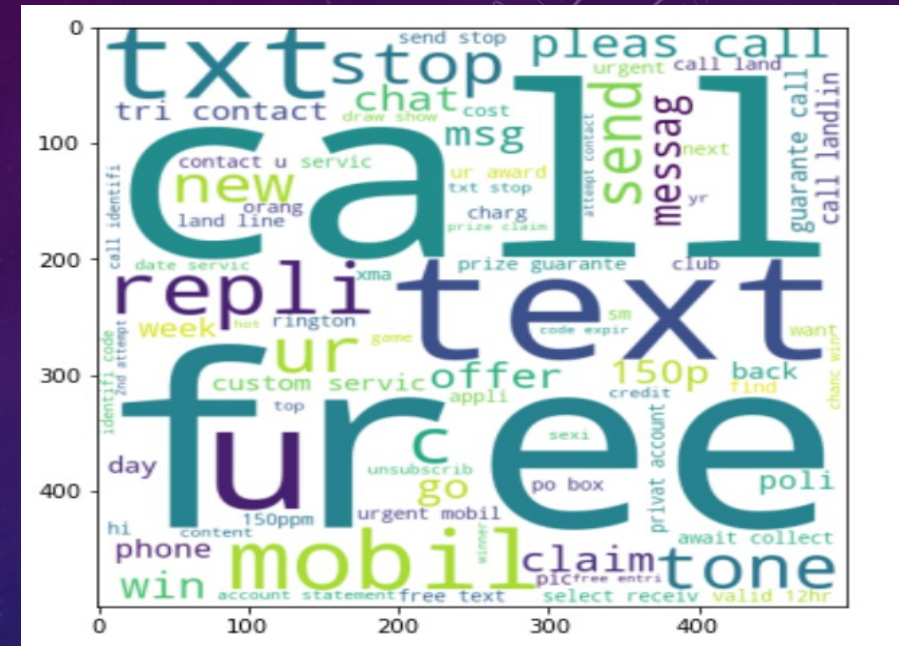


- Play an important role in our lives because of many reasons such as personal communications, business-focused activities, marketing, advertising etc.
- Make life difficult when they are used outside of their purposes.
- Spam emails can be not only annoying receivers, but also dangerous for receiver's information security.



# Solution

- NLP concerned with the processing and understanding of human language.
- Transform textual data into numerical representations Using nltk.
- Predict Spam/Ham Using Naive Bayes Classifier.



# The WOW Solution

- Use NLTK library that work on human Dataset.
- Naive Bayes Algorithm Gives Better Accuracy Result



2	Multinomial NB	0.959381	1.000000
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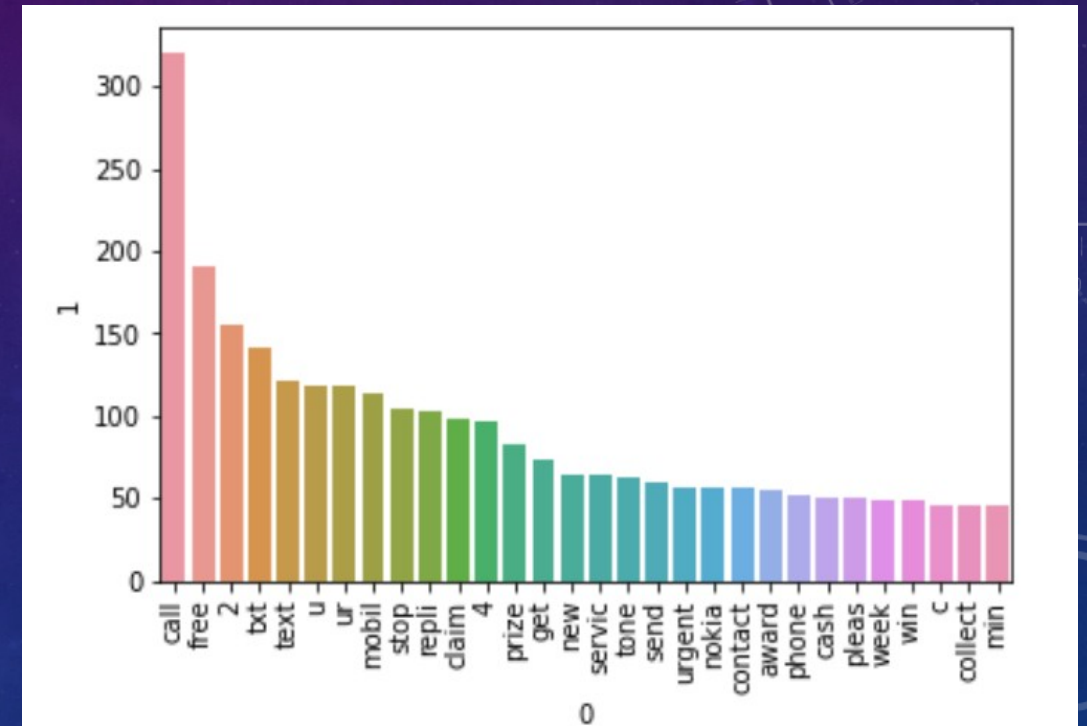


# Naive Bayes Classifier

- Simple probability classifier that calculates a set of probability by counting the frequency and combination of values in given dataset.
- Represent as a vector of feature values.
- It is very useful to classify the e-mails properly.
- The precision and recall of this method is known to be very effective.

# Results

	Algorithm	Accuracy	Precision
0	Gaussian NB	0.876209	0.523148
1	Bernoulli NB	0.970019	0.973451
2	Multinomial NB	0.959381	1.000000
3	Logistic Regression	0.946809	0.988235
4	SVM	0.966151	0.981308
5	Decision Tree	0.957447	0.835714
6	Random Forest	0.975822	1.000000






# Live Analysis

The background is a gradient of dark blue and purple, speckled with white dots resembling a starry sky. Overlaid on this are several faint, light-blue geometric patterns. In the top right, there is a large circular scale with degree markings from 0 to 210 and concentric circles. In the bottom right, there are concentric circles with dashed lines and arrows indicating a clockwise direction. In the bottom left, there are also concentric circles with dashed lines and arrows. A small, partial circular scale is visible in the top left corner.

## Credits:

- Mrs khyati Nagpal
- Mr Mohammed Ameer

The IBM logo is displayed in white on a black rectangular background. It consists of the letters 'IBM' in a stylized, horizontally-striped font.The edunet foundation logo is shown on a white rectangular background. The word 'edunet' is in a blue sans-serif font, with the 'n' and 'e' in red. Below it, the word 'foundation' is in a smaller, grey sans-serif font.