

## Filter Illud

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### ABSTRACT

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Data filtering in IT can refer to a wide range of strategies or solutions for refining data sets. In the current day world, most of the communication is done using a messenger platform, irrespective of it being professional or personal. These messenger platforms have their own notification procedures, which might cause distraction during work hours. Hence, using the concept of data filters and segregating messages that are related to both personal and professional spaces would allow one to centralize their current activities according to their will. In this research paper, we would like to propose a filtering app that would allow the users to prioritize the notifications they receive depending on the switch personal and professional space. We would implement this by using the concepts of text classification and deep learning algorithms like Naive Bayes Text Classifier.

Keywords : Data filtering, Naïve bayes, Heuristic spam filter, Adaptive spam filter

### I. INTRODUCTION

Communication is the key to a successful business. Most of the messenger platforms these days have their notification procedures which might cause distraction during work hours or when one is at leisure. Modern-day workspaces spend a lot of time in activities that require collaboration with others. With such an advancement in technology, we often tend to use digital communication techniques to collaborate with co-workers and other organizations. Henceforth, we have a lot of digital messenger platforms to fulfil this requirement. Besides, there are a few functionalities that tend to hinder the purpose of such platforms.

Our dependence on social media has exponentially increased over the last decade with the prevalent technological advancements. Such phenomenon has notably shifted and redefined the paradigms of communication. The benefits of using social media extend far beyond what we realize. Modern day work spaces spend a lot of time in activities that require collaboration with others. With such an advancement in technology, we often tend to use digital communication techniques to collaborate with co-workers and other organisations. Not only are we dependent on social media in our work space, but also, we are in need of it when it comes to communicating with our acquaintances. Henceforth,

we have a lot of digital messenger platforms in order to fulfil these requirements.

Besides, there are a few issues rising with the functionalities of such platforms. The notification procedure tends to cause distractions during work hours or off-work hours to its users. Therefore, the research paper proposes the idea of a notification filtering system, in which one can filter notifications depending on the space they are.

For instance, if a person is having a day off from work but yet continues receiving texts or any notifications regarding the workplace it will surely ruin the time off or at least will keep the person distracted the whole time and vice versa.

## II. RELATED WORK

During research we came across various methods used to filter data in which some of them used adaptive learning to filter spam messages from the legit ones. Some of them used heuristic based filters i.e analysing the patterns of spam texts enhance the algorithm accordingly.

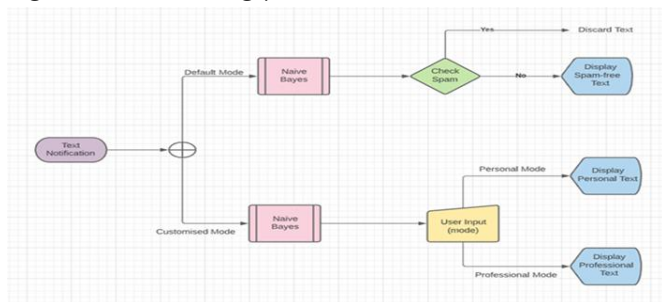


Fig.1: Workflow of Filter Illud

## III. Methodology

The proposed text classifier model categorises the notification from various text messengers according to the user input [1]. This model is to segregate the notifications in a systematic manner with respect to the mode chosen. The user will be given an option of

choosing one mode among the two modes i.e. Default and Customise.

Under the default mode, the spam messages would be filtered out and the user will be left out with only organic messages. This will classify texts from different messenger platforms if they are spam or not [2].

Whereas, in the customise mode, the user will be permitted to categorise the notifications under personal or professional categories.

Under the Personal category, the users can prioritize notifications of all the groups or people they want to be notified of when they are at leisure.

On the other hand, under the professional category, the user is permitted to prioritize the notifications that they want to be notified of in professional space.

### 1. Notification extraction-

The text-messages received by the user are displayed in the notification bar. We would retrieve the messages from the notification bar and store them in a container so as to categorise them further in accordance with the chosen mode by the user.

### 2. Classification-

According to the user’s choice, we would proceed further with the text classification, either into default or customized modes.

Using Naive bayes algorithm, according to the mode chosen by the user:

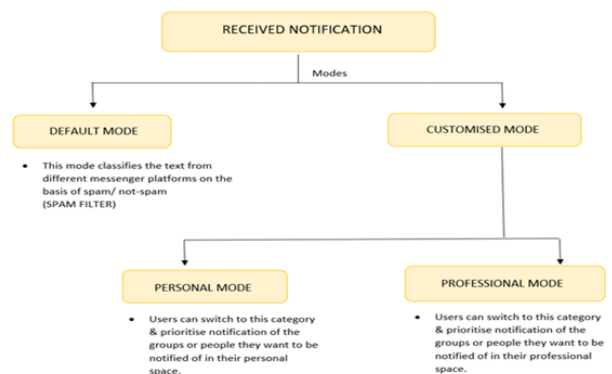


Fig.2 : Modes

#### IV. RESULT

The proposed model includes Heuristic Spam filtering technique as well as Adaptive Filtering technique that diligently classify texts accordingly in both default and customise modes.

Effective incubation of the model with its components specified for filtering texts will result in lesser distraction to the people while cherishing their particular spaces. It will provide users full control to regulate and choose what they want to be notified of. This will hence, avoid a lot of distraction during the work time for officials or study time for the students which has been a topic of concern for a very long time.

The proposed model for filtering texts will help the users to segregate their spaces in a very efficient manner without missing out on any important info related to the space they are in at that particular point of time. Suppose the person is in personal space, then he/she can switch to personal mode by customising the option provided and vice versa for the professional space.

The challenge with the model is the text can't be categories within groups rather the group itself can be categorised into personal or professional. For achieving the same more complex detection and more computational speed will be required.

#### V. DISCUSSION

The proposed model includes a spam filter and a notification classifier that aids the user to proficiently categorise the received notifications depending upon the mode chosen. Similarly, the categories under the customise mode allow the user to manually classify the messages received under either professional or personal categories.

Hence, the aim of this model is to improve the efficiency of the user depending on his/her current space. The user will be given a message stating the access required by the app for it's working. This model, however, poses a few questions. We'd like to recommend a few solutions to such questions.

In this model, we're majorly applying the following techniques:

For filtering the spam messages, when the user chooses default mode, we proceed further with Heuristic or Rule Based Spam Filtering Technique [2], in this approach uses already created rules or heuristics to assess a huge number of patterns which are usually regular expressions against a chosen message. Several similar patterns increase the score of a message. In contrast, it deducts from the score if any of the patterns did not correspond. Any message's score that surpasses a specific threshold is filtered as spam; else it is counted as valid.

While some ranking rules do not change over time, other rules require constant updating to be able to cope effectively with the menace of spammers who continuously introduce new spam messages that can easily escape without being noticed from message filters.

Whereas for the customise mode, Adaptive Filtering Technique [2] comes into play. The method detects and filters messages by grouping them into different classes i.e. Personal and Professional. It divides the message corpus into various groups, each group has an emblematic text. A comparison is made between each incoming message and each group, and a percentage of similarity is produced to decide the probable group the message belongs to.

Heuristic or Rule based Technique provides more efficient classification as by learning the patterns every time it detects a spam text. On the other hand, Adaptive Filtering Technique provides us liberty to classify the texts in the classes i.e. Personal and

Professional in accordance with the rules defined by the user.

Messages are encrypted on your device so the proposed app can't access them directly.

The only solution available is to read them from the notifications that the user receives and create a message backup based on their notification history.

## VI. CONCLUSION

Our proposed model used the concept of data filters and segregating messages that are related to both personal and professional spaces that would allow one to centralize their current activities according to their will since, most of the messenger platforms these days, have their own notification procedures which might cause distraction during work hours or when you are at leisure. The proposed system provides user control over the visibility of the notifications, according to their space and both the modes provided i.e. Default and Customise. This comes into play as a very user friendly, efficient and quite helpful with distractions faced due to messenger notifications.

Depending upon the utilization of this model, in the future we will try to make it more personalized.

## VII. REFERENCES

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