Short Message Service (SMS) Classification

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Abstract: Short Message Service (SMS) is an integral service of the mobile phone for users to communicate with people which is faster and convenient way to communicate. However, it has some limitations like incapability of searching and categorization of SMS, scheduling, marking SMS and there is scope to improve it. To overcome various limitations, we have proposed a mobile application with title MojoText - Text Messenger which solves real time problems of text messaging. Our system provides core functionalities of text messaging and beside tothat various facilities like categorization of messages based on personal, social, transactional and user defined categories with color codes, searching with customized date, scheduled text delivery, hiding of messages inside the app, reminders for due dates of billers, validity of texts, starred messages, pinned chats, signature, backup and recycle bin.

Key Words- Text Messaging App, SMS,Messanger, Categorization, Android SMS APP.

1. INTRODUCTION-

Now a day, SMS is necessary part of every mobile user for communication, getting important alerts, banking OTPs etc. Beside of the basic functionalities there is scope to improve it. To overcome various limitations, we are developing an android application is going to enhance the use of SMS by people in their day to day life. The user will avail all the facilities in the single application which would give him the eas GTe of SMS and will make it comfortable to use it. Also, the various kind of new features are added to the application that will be helpful in removing the drawbacks faced in the current SMS applications in mobile devices.

Short Message Service (SMS) is a text Messaging service component of a phone, Web, or mobile communication systems. SMS Application is an interface or the middleware between the human and message to communicate with each other.

SMS Application can be helpful in customization and adding the various features with respect to

the user interface .For different personal use or social use, SMS nowadays even being extinct, today the SMS is treated as the best way of authorization and authentication of the user's credential and contact information by using an OTP or any other activation methods. After the implementation of the android application, it will reduce the efforts of categorizing the SMS. The application will definitely be helpful in storing the messages and even in recovering if deleted by mistakenly. One of the major benefit the user will get in optimizing the memory i.e. after the validity of some SMS is expired it gets automatically deleted so space and efforts are saved.

2. RELATED WORK

Many text classifiers have been proposed in the literature using machine learning techniques, probabilistic models, etc. They often differ in the approach adopted: decision trees, naıve-Bayes, rule induction, neural networks, nearest neighbours, and lately, support vector machines. Although many approaches have been proposed, automated text categorization is still a major area of research primarily because the effectiveness of current automated text classifiers is not faultless and still needs improvement. A classifier is built by applying a learning method to a training set of objects. This model is further used to predict the labels to new incoming objects. With all the effort in this domain there is still place for improvement and a great deal of attention is paid to developing highly accurate classifiers. Refrence[15] classify web news stories based on memory based reasoning. Refrence [16] usesneural network with PCA to classify web news

3. APPLICATIONS

There are many potential applications of text classification. A good survey on the methods of text categorization and applications of text categorization can be found in [26]. In this section we examine some of the text classification applications.A. Document OrganizationA news or media company will typically see hundreds and thousands of submissions every day. In order to efficiently handle such vast flow of information,

there is a need of an automatic text classification system, which would categorize each document by topics so that they could be sent to the relevant recipient.Maintaining the Integrity of the specification.

1. Document Organization

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2. Spam Filtering

Receiving of vast quantities unsolicited junk e-mail, i.e, spam is a big problem. A text classification system could, in the ideal case, categorize incoming messages into genuine and spam categories, rejecting these that it found to be spam.

3. Filtering Pornography Content

As the Internet has rapidly been expanded, we can find information quickly and easily. The

exponential increase of information in internet has raised the issue of information security. Pornography web content is one of the biggest harmful resources that pollute the mind of children and teenagers. Several web content classification approaches have been proposed to avoiding these illicit web contents accessing by the children. Text classification controls search results from google, yahoo and other search engines. When used, web sites containing pornography and explicit sexual content can be blocked from google, yahoo and other search engines

4.EXISTING SYSTEMS

Following existing applications are available for the various feature on SMS but having the limitations to satisfy the users:

1) **Evolve SMS:**This application has following features:
- Multimedia support
- Password protection
- Sliding conversations
- Privacy

2) **8 SMS:**This application has following features:
- Stock Messages
- Reply from popups
- Clean message

5. SYSTEM ARCHITECTURE

First of all, the SMS will be received by the mobile i.e. by the mobile application. For all the process to be happening the android application must be set as the default messaging application of the user. As soon as the message is received by the application the message is searched for the tokenization and being read for finding the particular keywords for finding its correct category. After this procedure the feature extraction procedure is being processed and on the basis of it the message is finally being categorized. Figure 1 shows diagrammatic representation of system architecture.
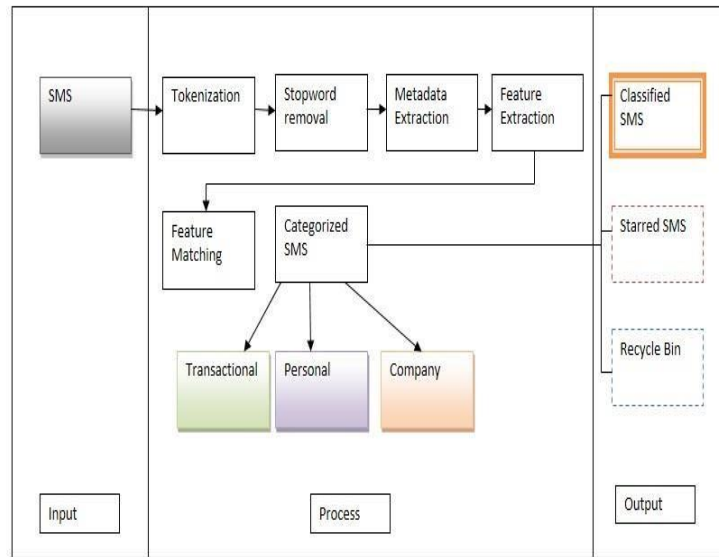
Figure 1: System Architecture

We have used pattern matching and keyword matching algorithms to categorize the SMS. Stop word removal is used to remove general words like "a", "an", "the" etc.

6. FEATURES OF APP

1)   Replying messages from Notification Window. No need to open app every time.

2)   Message search with customized time period. (User will define time period)

3)   Messages will be categorized in four main by default categories viz. Social, Transactional, Promotional, User Defined Category.

4)   Colour codes for each category.

5)   Popping out due dates of various bills mentioned in the massage as a reminder to user.

6)   Recycle bin to safely delete messages.

7)   Starred message to identify and access important messages fast.

8)   Pinned chats at the top of screen.

9)   Scheduled of messages for various reasons like birthday messages.

7.FUTURE SCOPE

   The Scope of the Project gets widened ever since the categorization of SMS's is done. This will automatically gain the some of the features of various online messaging applications. The implementations of application will encourage the people to use it because they will be getting notified for their activities and transactions to be done.

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