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PROJECT PROPOSAL

Opinion Mining of Social Networking Site

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Presented by:

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1. Summary

1.1. Purpose:

Due to huge amount of data posted online, decision making process considering opinions play a crucial role in everyone's life. World Wide Web has tremendous amount of unstructured data present in web forums, social networking sites and other social platforms as reviews which diverts our study towards mining the opinions on web. Text analysis is much more mature than unstructured data. Mining is tough for these types of data because of its noisiness and this is the chief bottleneck for designing text mining system. They suffer from spelling mistakes, grammatical errors and improper punctuations because they are informally written. Opinion mining provides a clear platform to catch public mood by filtering the noise data.

This project is focuses on extracting comments, classifying them into positive, negative and neutral category and finally providing a recommendation as whether to buy or reject a product. This application will provide the facility of advertisement to different companies which makes many people aware about the topic/product posted. This system will also useful for the users who need review about new products.

Social Networking sites fascinate the people to use the site for checking the opinions of user about a specific product. These opinions play a very important role for customers and product manufacturers as they tend to give better knowledge of buying and selling by setting positive and negative comments on products and other information which can improve their decision making policies.

1.2. Anticipated Results:

Mining opinion data that reside in online discussions is a way to track opinions of people on specific subjects. The basic purpose of this system to provide a friendly environment to companies and users to communicated with each other. The companies involved in this system will post about their products for advertisement and to get reviews from the product user. Users will give reviews on the products by comments then system will operate mining methods on the reviews which will aware the companies which product is most liked by their customers/users or which product demand is higher among the users.

World Wide Web contains large amount of data such as a social networking site which include millions of user who wants to know about the latest trends or products. This system will include filters of categories for the users. User can select the category of which type of products they want in their home page of account.

2. Introduction

A social networking site in which companies can post about their products to get the reviews and customer/user will comments on the post. Our system will parse the comment and rank the post by using text analysis techniques. This system uses opinion mining methodology in order to achieve desired functionality.

Opinion Mining is the field that deals with the mining of subjective statements from texts, the identification of opinions, the estimation of opinion orientation and the extraction of argument that relate to opinions. Mining opinions in online discussions requires an appropriate representation.

Opinion Mining for Social Networking Site is a web application. Here the user will post his views related to some subject other users will view this post and will comment on this post. The System takes comments of various users, based on the opinion, system will specify whether the posted topic/product is good, bad, or worst.

User can change his own profile picture and can update his status. These changes can be viewed by various users. We use a database of sentiment based keywords along with positivity or negativity weight in database and then based on these sentiment keywords mined in user comment is ranked.

Once the user logins to the system, user can view his own status as well as he can view the topics posted by other users. When the user clicks on a particular topic user can give his own comment about the topic. System will use database and will match the comment with the keywords in database and will rank the topic. User can edit his own profile and can change his profile picture. The role of the admin is to add post and adds keywords in database. This application can be used by users who like to post view about some events/products that is already held, or can post about the events that is going to be held.

2.1. Activities:

The activities involved in the system are as follows:

- Sign up and Sign in for the individual users and companies both.
- Add or change profile pictures and add descriptive information about a company/user such as address, phone number etc.
- Companies/users can add post about their existing or newly launched products.
- User can comment on the post which are added by companies to give reviews about the product.
- Companies and users/customers can view the comments on different products whether the product is good or bad among the audience who uses the product.
- Users and companies can like and dislike the post which will also affect the review and rank of a product.

- Companies/users can delete and edit their post if required.
- Users can delete and edit their comments if required.
- Companies and users can edit their profile information and can change their password whenever they want.
- Companies and users can logout their account and can login again any time.

2.2. Target Population:

This system will target two types of population first is different types of companies and second is the individual user who uses the products of the companies.

2.2.1. Companies:

On the time of registration the company's owner will click on the button(request for company registration) after this the system will open the page on which he/she will give all the detail about their company(which is consist of Owner name, Company name, E-mail address, Mobile number and request letter for company's registration).

Company 'owner will receive the authentication code from the admin when request will be accepted from the admin. When the owner will register he/she will able to see the companies options select their company name form the list of the company names which are already exist.

Company's owner can upload the post about their product (which can be consist of any document/ file about their product, or can be commercial of product) .Can also get the opinion of users on the bases of rating to know the good and bad points of product.

2.2.1. Individual Users:

User can view the post, like and dislike the post and can also comment the post. User is a simple user so when the user will register he/she will not able to see the Companies options for selections. After registration when user will login after viewing the post the user will like dislike and comment the post form which the rating was occur on the behalf of keywords which are stored in database. But the user cannot upload any kind of post.

2.3. Reasons for implementation:

There is a lot of social networking sites available but they are not providing opinion mining of reviews to rank the product/event/topic. Our system is basically based upon the opinion mining in which system will analyze the text and make a decision about the product that which one is famous and favorite among the customer. It will also tell that which product is mostly disliked by the customers/users. Our system will gives a facility to the companies who wants to know about their products reviews and ranks. Companies can also advertise their products here.

This web system also give advantage to the users who wants to buy new products but they are not aware that which one is good for them or according to their needs. Now a days social networking sites contains lots of user in which most of people interests to know about the new products.

This web system need to implement because there is not such kind of system exists on the internet. It will give benefits to the companies to grow their business more effectively and make decisions about the products. Companies can decide which product quality needs improvements according the customers' demands. By this system companies can gain trust of the customers/users by selling the good quality products.

In another way this will protect the users/customer to buy the less effective and wrong product. They can buy the product which is more suitable for them and which quality is better than other products. They can be aware of which company sell the good quality products by checking the ranks of the products so next time when user wants to buy a product he/she will firstly check that particular company because they trust that company.

3. Needs/Problems (Problem statement)

- The problem of checking the reviews of products for companies and users.
- There is no as such one platform which only deals with products reviews.
- No such system which consider the companies and customers understanding with each other by ranking the products on the basis of reviews.
- Customers/users are not aware of which product quality is good or bad.

- Companies never know that their which products quality needs improvement according to the customer demands.

- No opinion mining system implemented yet which will use mining methods to rank the products for the companies and individual users.

- There is no web system which filters the products according the customer's needs and then also rank the products automatically.

3.1. Population who faced the problem:

The target population of opinion mining for social networking site which are facing these problems and needs this web system include all the people/users:

- ✓ Who uses social networking sites?
- ✓ Who wants to buy any kind of products?
- ✓ Who wants to know about the product's quality based on reviews?

It also include the companies:

- ✓ Who wants to know about their products ranks among the customers?
- ✓ Who wants to increase the quality of products?
- ✓ Who wants to gain the trust of their customers?

3.2. Time at which problem arises:

This problem is exists since there are a lot of social networking sites who provide the products details to the customers but never apply the mining methods to rank the post based on the reviews. In another way this problem has faced by the companies and users to know about the products.

This problem is addressed many times by the researchers. They discuss the techniques and methods of opinion mining. The researchers gives loads of information by discussing this problem but there is no such kind of web system implemented yet.

3.3. Impacts of problems:

This problems lead the users/customers to buy the wrong and inefficient products for them. They face difficulty to find out the quality products. They are never aware of which products ranks higher or lesser among the users/customers of products. If the product rank is higher than the people around the population will also aware of which products is good and efficient so they will also want to buy new products without the fear of loss of money. It will increase the number of customers.
This system give impact on the companies involved in it who wants to sell the product and wants to increase the number of customers in their company. Companies can gain more trust by the customers. Companies can improve the product quality. The other companies surroundings in these companies will get curiosity that how to rank the products higher but they first need to know the reviews of the products and the can get reviews by using our system. So basically this system will increase the effective products in different companies

4. Goals/Objectives

- Registration for companies and users.
- Request to get the permission for a company owner registration.
- Individual logins for every companies, users and admin.
- Provide facility of posting about the products only to the companies and individual users.
- Facilitate the user by multiple options to rate the post by like, dislike and comments.
- Companies can also comments about the products of other companies.
- Companies and user can check the review about the different products.
- Users can follow the company to see the products of that company in their home page.

- Companies can also follow the other companies.
- Search bar to search about a company to check their products.
- Facility to change profile picture, edit profile, change password for the companies and users both.
- Provide a login to the admin to use the admin panel.
- Admin can accept the request of companies for registration and send them a permission e-mail.
- Admin can add new keywords to the database.
- Admin can block an unauthorized company and user account.

4.1. Benefits of reaching goals/objectives:

- By providing an individual account to every user/customer and company will provide them a level of security so the no unauthorized person can access their account.
- System will the verify the company before providing the registration and access to account so there will be no fake company exits in our web system.
- Companies can post about their products and get the reviews about the products from the customers/Users.
- If wrong product is posted or wrong information about the product has entered so the companies can delete/edit the post.
- User can give the reviews about the products by commenting on the posts by the companies.
- If wrong comment has entered or commented on wrong post users can edit/delete their comments.
- By using the filters of the system they can see only those products in which they are interested.

- Following the companies by other companies will provide a facility to the companies about the new launch of products.

- By adding a logo as a profile picture users can identify the company easily.

- By adding new keywords by the admin in the system will remains up to date by keywords to ranks the posts more effectively.

- By blocking a user or company account there will be no mess of the fake or wrong companies or users.

5. Procedures/Scope of Work

5.1. Scope of Work:

Rapid increase in internet users along with growing power of online review sites and social media has given birth to Opinion mining, which aims at determining what other people thinks and comment [1]. Now a days before purchasing a product people must search the product online to get reviews from the other people who used the product. For this purpose people visit different websites for their specific product. Current search engines can efficiently help users obtain a result set, which is relevant to user's query [2].

Opinions play a crucial role in the decision making process. Analysis in the field of making decisions and setting policies has shown that sentiment analysis and Opinion mining has become increasingly important in the field of Information Retrieval and Web analysis. Opinion Mining provide the facility of detecting and extracting subjective information in text document [3].

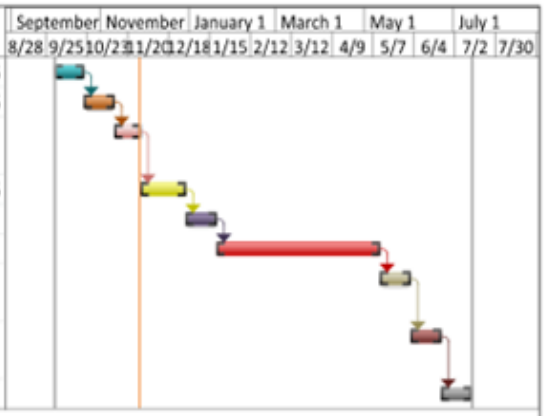
Social networking has tremendous prospects in future. Social networking has become an important tool of marketing in true sense of customer orientation.

Social Networking sites fascinate the people to use the site for checking the opinions of user about a specific product. These opinions play a very important role for customers and product manufacturers as they tend to give better knowledge of buying and selling by setting positive and negative comments on products and other information which can improve their decision making policies[4].

6. Timetable

Gantt chart:

ID	Task Mode	Task Name	Duration	Start	Finish
1		Project Selection	15 days	Sat 10/1/16	Thu 10/20/16
2		Finding Supervisor	15 days	Fri 10/21/16	Thu 11/10/16
3		Planning and requirement Elicitation	12 days	Fri 11/11/16	Mon 11/28/16
4		Software Design	1.15 mons	Tue 11/29/16	Thu 12/29/16
5		Design verification	15 days	Fri 12/30/16	Thu 1/19/17
6		Software Development	4 mons	Fri 1/20/17	Thu 5/11/17
7		Implementattion and Unit testing	15 days	Fri 5/12/17	Thu 6/1/17
8		Integration and system testing	15 days	Fri 6/2/17	Thu 6/22/17
9		Operation and Maintenance	15 days	Fri 6/23/17	Thu 7/13/17



Project: Gantt-Chart-fyp
Date: Mon 11/28/16

Task		External Milestone		Manual Summary Rollup	
Split		Inactive Task		Manual Summary	
Milestone		Inactive Milestone		Start-only	
Summary		Inactive Summary		Finish-only	
Project Summary		Manual Task		Deadline	
External Tasks		Duration-only		Progress	

7. Budget

We would like to request for the hosting and domain to implement/online our project. Ultimate plan in https://pk.godaddy.com/hosting/web-hosting provide the more power and security. It also handles the most complex sites

and heaviest traffic. Opinion mining of social networking sites contain large amount of database and this plan include unlimited amount of storage so this is suitable for our project. This hosting plan need to renew after every month.

Description of Work		Payment	Duration
Hosting & Domain	For buying for the first time	$ 8.0706	For one month
	For renew per month	$ 15.60 * 12 = $187.2	For 12 months
Total		**$ 195.27**	**For one year**

8. Key Personnel

Project manager	Maám Sidra
Team	Tayyaba Rani, Anam Shehzadi, Shafaq Sharafat

9. Evaluation

Progress will be evaluated throughout and at the end of the project by the supervisor and project manager. Unit testing and evaluation is done module by module by the supervisor after integrated these modules project manager will evaluated the project.

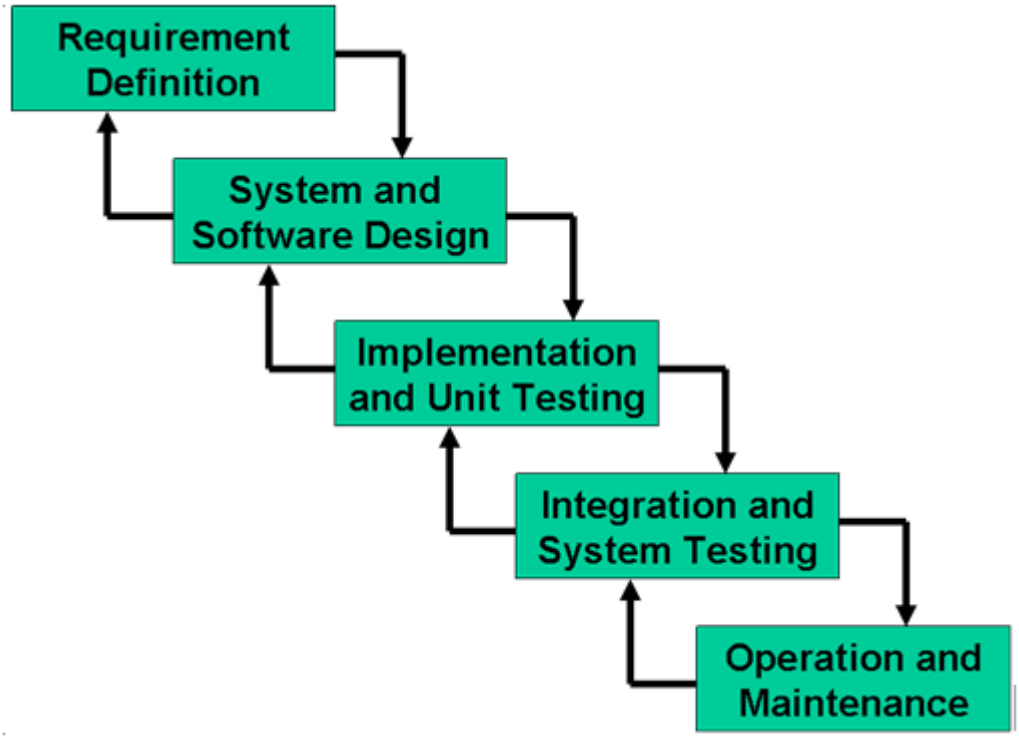
Many models and techniques are followed for software development these days but most widely used is named as Software Development Life Cycle (SDLC) or Waterfall Model.This model include the testing of every unit after completed it.

- First module of project was software requirement specification submitted to our supervisor and accepted by her successfully.

- Second module was design documentation submitted to our supervisor and accepted by her successfully with the instruction to add a new feature of add posting by the individual users.

- Third module was design interface of project was tested and evaluated by our supervisor and accepted by her successfully.

It comprises mainly of following seven steps.



Appendix

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2. Khairnar, J., & Kinikar, M. (2013). Machine Learning Algorithms for Opinion Mining and Sentiment Classification. International Journal of Scientific and Research Publications, 3(6), 1–6. Retrieved from http://www.ijsrp.org/research-paper-0613/ijsrp-p18125.pdf
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Web Searching:

We have do a lot of web searching but did not find any system which include opinion mining for social networking site. No web system which provide the facility to add reviews about the products and rank the product on the basis of reviews.

Glossary:

Opinion Mining:

Opinion mining refers to a sub discipline of computational linguistics that focuses on extracting people's opinion from the web. Opinion mining is a type of natural language processing for tracking the mood of the public about a particular product. Opinion mining, which is also called sentiment analysis, involves building a system to collect and categorize opinions about a product. . Automated opinion mining often uses machine learning, a type of artificial intelligence (AI), to mine text for sentiment.

Social Networking Site:

A social networking service (also social networking site, SNS or social media) is an online platform that is used by people to build social networks or social relations with other people who share similar personal or career interests, activities, backgrounds or real-life connections.

Artificial Intelligence:

An area of computer science that deals with giving machines the ability to seem like they have human intelligence. AI (pronounced AYE-EYE) or *artificial intelligence* is the simulation of human intelligence processes by machines, especially computer systems.

Misbah Tariq,
Project Supervisor

Date: 7 Feb, 2017