**Software Requirement Specification**

**For**

**Opinion Mining On Twitter Tweets**

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**1. Introduction**

The main purpose of this project is to build an interactive application to determine the opinion of today’s society on a particular topic of interest. This app will help determine the current bias (positive /negative) of an ongoing issue and help in arriving to conclusions. We make use of twitter API to extract tweet of related topics and then perform sentiment analysis.

**1.1 Sentiment Analysis**

Sentiment Analysis is the process of computationally identifying and categorizing opinions expressed in a piece of text, especially in order to determine whether the writer's attitude towards a particular topic, product, etc. is positive, negative, or neutral.

In our project we have used the twitter API and we extract the tweets of a particular topic and determine whether the opinions are  positive / negative opinions.

An opinion is an expression (a binomial to be precise) that consists of two key components:

* A target (which we shall call “topic”)
* A sentiment on the target/topic.

Example: “I love this company“, “this company” is the topic, and the sentiment (as expressed by the verb “love“) is positive.

**1.2 Why use Twitter?**

* Twitter is an online social networking service that enables users to send and read short 140-character messages called "tweets".
* Registered users can read and post tweets, but unregistered users can only read them.
* Users access Twitter through the website interface, SMS, or mobile device app.
* The service rapidly gained worldwide popularity, with more than 100 million users who in 2012 posted 340 million tweets per day. The service also handled 1.6 billion search queries per day. In 2013 Twitter was one of the ten most-visited websites, and has been described as "the SMS of the Internet". As of May 2015, Twitter has more than 500 million users, out of which more than 302 million are active users.
* A wide range of social issues addressed in tweets, along with an active user following makes twitter a near reliable repository for opinion mining.

**1.3 References:**

1) IEEE papers

**2 Overall Description**

**2.1 Product perspective**

**2.2 Product Functions**

* Extracting tweets from twitter
* Tokenizing the tweets
* Weighting – positive /negative
* Generate output graphs

**2.3 Operating Environment**

* Technologies/Toolkits: NLTK v3.0.2 (python)
* Software: Python, Twitter API (v1.1).

**2.4 Design And Implementation Constraints**

* High speed net connection for pulling out tweet from twitter.

**2.5 Dependancies**

* Twitter API

**3 External Interface Requirements**

**3.1 User Interface**

* Android app
* Graphs

**3.2 Hardware Interface**

**3.3 Software Interface**

**3.4 Communication Interface**

**4 System Features**

**4.1 System feature 1**

**5 Requirements**

**5.1 Safety Requirements**

**5.2 Quality Requirements**

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