

# Automation of Social Media Analysis by Web Intelligence

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**Abstract**— Usage of social media is increasing like anything. Social media is the latest generation of internet. It is characterized by trends of social life. The usage of various social media is increasing like anything. Social media is not only giving connectivity to people but also offering opportunities to the business sectors now a day. The data available on social media can be used to generate some information and this information can be useful to any organization to decide and fulfill their milestones. This paper discusses about procedure of social media analysis by using web intelligence aspect. The various research methodologies are really useful to analyze data available on social media and social networking. In this paper we are going to discuss automation of analysis of social media by using web intelligence.

**Keywords**— *Web Intelligence, Social Intelligence, Business Intelligence, Cyber Security, Social Security*

## I. INTRODUCTION

The 21<sup>st</sup> century of this world, especially 1<sup>st</sup> decade is characterized by social media for individuals and business sectors. The popularity of social media is increasing like anything because it is providing platform for every individual to share their thoughts and opinions. But organizations and business sectors are also using social media to realize their goals. The data available on social media is the real fact because of it has been generated by consumers or potential clients of the organization. Those data would be real time and by many of the people belongs to the organization. Social media is the only state where people are giving frank comments and views so there is no limitation related to data for processing information and discovering knowledge [1].

Furthermore, present business sectors are always waiting for the opportunity to get large scale information that reveal core trends and dependencies that affects performance of the organization. Web intelligence is one of the ways to obtain such kind of insights. The requirement of real time web intelligent systems and social media attractiveness propose room for amalgamation. The system that has been designed to derive actionable information from social media and to provide as well as support decision making system to management which is known as social web intelligence.

Thus far, web intelligent systems mainly derive managerial information from internal data which has been given as input

but now there is a social media platform. But now the question is how to derive and what kind of information should be derived from data of social media. Furthermore it is also requires to define about applicability of web intelligence towards data of social media. The web intelligence strategy works on key-performance indicators at where reflecting performance of different web pages are linked to mentioned key performance indicators. [2]

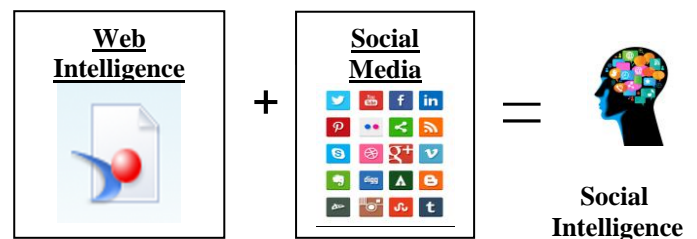


Fig. 1. *Web Intelligence Technique for Social Media*

Whereas the link between social media and key performance indicators in web intelligence may provides opportunities to generate social web intelligence from the content of users on social media. It is not possible to analyze the content which is not generated by users of social media[3]. The 21<sup>st</sup> century of this world, especially 1<sup>st</sup> decade is characterized. It is true that business sectors are depend on the content of social media which must be generated by their users. There is no such kind of clarification about the content of social media which would be useful for business sectors to analyze by using web intelligence. But in our research study we are going to investigate industry related and customer relationship related social media data for our web intelligence procedure[4][5].

## II. OBJECTIVE OF OUR RESEARCH

Presently, at one side social media is the new aspect and acknowledged as the perfect source of data of which important and valuable information can be resulted. Whereas at other side it is also difficult to identify about organizations and business sectors which are able to collect related social media data and how organizations should proceed with these kinds of data with respect to web intelligence concept. So we can give following objective of our research can be specified. To

improve and automate a procedure [15] of social analysis described.

So the specific objective of this research paper is to design and development of the procedure which can be utilize to social media data through web intelligence and identify the business sectors which are applicable to utilize these information and knowledge.

TABLE I. DIFFERENT OBJECTIVES OF DIFFERENT SOCIAL MEDIA

Different Objectives of Social Media	Social Media		
	Facebook	Linked In	Twitter
Presence	✓		
Sharing			✓
Conversations	✓		✓
Groups	✓		
Reputation	✓	✓	✓
Identity	✓	✓	
Relationship	✓	✓	

### III. RESEARCH METHODOLOGY

In this research we are going to take samples. The samples of social media messages related to fix 18 various industries which are performing various customer levels. Though we are taking samples from different industries we can get more benefits and can differentiate various customer relations. We can also able to gain insight in possible differences between social media messages related to these unyielding. We have been included data of various social media messages from different platforms .These all data we have crawled in our local database for future analysis. The content of social media sourced from Facebook public pages, Twitter, Friendfeed and YouTube. These are mainly platform famous in India these days.

To get imminent in the social media messages and their data related to our specified organizations we are observing and getting average daily post of related firms. We can apply proxy also for collecting daily posting of related social media. Then after, we can apply content analysis to differentiate categories based on post available over there. These categories based on key performance indicators as outcome of these content analysis are directly allow us to find out relatedness of social media messages with various indicators of key-performance [12][14].

Integrating the new exterior data source is the requirement of conventional web intelligence systems to be attuned. A social intelligence practice must be reliable with these conventional systems of web intelligence and furthermore consider the faces up to involved when practicing with data of social media. As the specific requirements of social intelligence is based on general applicable concepts of web intelligence [10].

Moreover, the big challenge available for the dispensation of this social media data are exposed by the compilation of social media messages for content analysis. Based on conventional web intelligence concepts and challenges exposed in the analysis of content, a web intelligence practice

is developed. The practice is verified by analyzing the consistency with existing web intelligence systems and ability to resolve the specific issues involved in process of social media data [11].

### IV. APPLICABILITY OF SOCIAL MEDIA TO WEB INTELLIGENCE

In this research the applicability of social intelligence are going to investigate first on two different realities. First of all the volume of post available on social media are going to investigate to get in the data available for organization. Kindly note, the data is available from social media. The volume is not sufficient to come across with conclusions of applicability of the data towards web intelligence. So, now it is necessary to analyze related content of social media. It has been analyzed subject to messages [6].

Volume, in which the average of daily posts from organization to organization are gathered. It is for sure that applicability of web intelligence will not be applicable for all. Fig. 2 explains average daily mentions of customer relationship related [7].

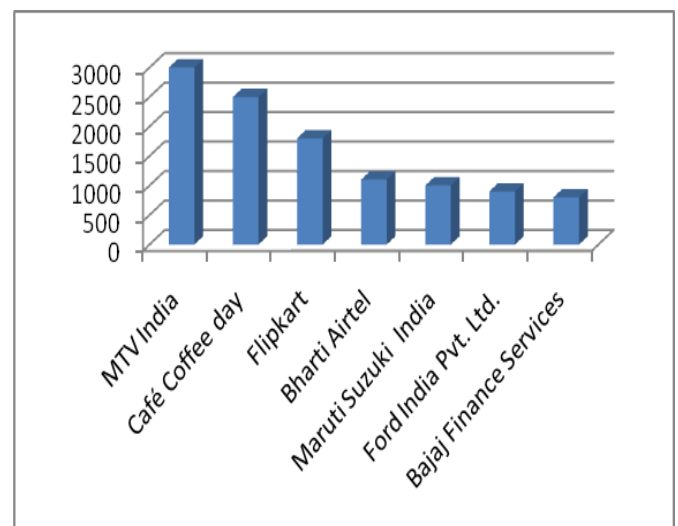


Fig. 2. Average Daily Mentions of according to Customer Relationship

Another parameter on which the organization related data content would be going for investigation related to types of industries. We are including here 7 different organizations from various types includes entertainment, retailer, e-commerce, telecommunication, automobile and finance. In Fig. 3 we have mentioned average motions according to the type of industry.

In Fig 3 we have mentioned combined approach in which customer and industry type related specification has been given. The assessment of the volume of social media mention which are created on web, this paper examined the subject of social media related posts in order to link the mentioned to the organizations key performance indicators.

The messages of social media are the messages which are classified into groups based on given subjects. These all

groups are stands on various key performance indicators. As a result, the samples of collected messages from social media are manually classified [13].

require making it more effective by applying some modification [8].

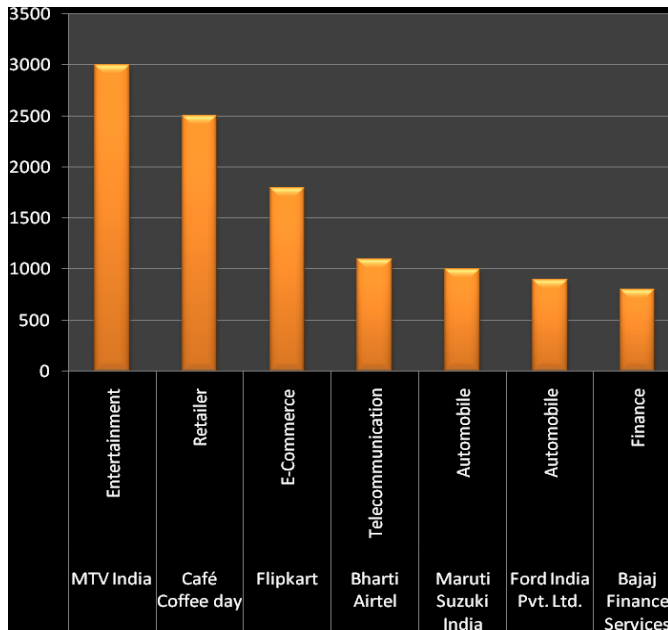


Fig. 3. Customer Relationship and Industry type Data of Social Media

In table II there is a mention of social media categories with respect to post of various organization on social media. The above content analysis suggests

TABLE II. CATEGORIES OF MENTION ON SOCIAL MEDIA

1	Financial Report
2	Relationship with Customers
3	Relationship with Employees
4	Performance Operation
5	Quality of product and services
6	Performance of environment
7	Innovative Products
8	Community
9	Not categorised
10	Spam

The above analysis of content in research suggests that the subject of messages related to social media of organizations are might be post related to business to business, business to customer and business to government as well. Up to this movement business to business information was available internally but now it would be available globally [9].

Now based on convention framework or approach of web intelligence would not be useful for social intelligence so we

The initial sample code of Web Intelligence for generating social media performance measurement report

```

Public static void main (String[] args)
{
    reportService_Service = new
    ReportService_Service();
    ReportService reportService =
        reportService_Service.getV2Repo
    rtService ();
    // to call the methods we are
    looking for

    // Our service call credential set
    up
    String username = "hagohe1";
    String password = "hardik123";

    // New Report Request Object
    Instantiate
    ReportRequest reReq = new
    ReportRequest ();

    // The report we wanted to Run for
    analysis
    repReq.setReportAbsolutePath("D:/Re
    search/Report/data.xdo"); // The name
    with absolute path of data

    // Procedure of Report Generation
    repReq.setAttributeFormat("pdf");
    // By default it would be HTML
    repReq.setReportOutputPath("/Report
    /Hard_dta.pdf"); // The path on server
    to save our report in pdf mode

    // See the bellow:
    try {
        reportService.runReport (repReq,
        username, password);
    } catch
    (InvalidParametersException_Exceptio
    n e) {
        System.out.println("Invalid
        Parameter Exception");
    } catch
    (AccessDeniedException_Exception e) {
        System.out.println("Access
        Denied Exception");
    } catch
    (OperationFailedException_Exception e)
    {
        System.out.println("Operation
        Failed Exception");
    }
    // After Completion
    System.out.println("Success!");
}
    
```

TABLE III. WEB INTELLIGENCE TASKS TO CREATE SOCIAL INTELLIGENCE

Web Intelligence Tasks	Converted to Social Intelligence
Strategic Mapping	= Searching Terminologies
Collecting	= Unstructured Data
Data Pre-processing	= Make it in structural form
Categorizing	= Categorized Data
Analysis	= Information of Business Unit
Mapping Insight	= Action Plan according to gained Intelligence
Reacting	= Reaction according to Social Intelligence

In above table III we are defining rather converting conventional web intelligent tasks into social intelligence task to discover knowledge which can be helpful to the organization and it requires automating.

```

"retrived_status": {
  "contributors": null,
  "text": "#Crowdsourcing – drivers already generate traffic data for your smartphone to suggest alternative routes when a road is clogged. #bigdata",
  "geo": null,
  "retrived": false,
  "in_reply_to_screen_name": null,
  "truncated": false,
  "entities": {
    "urls": [],
    "hashtags": [
      {
        "text": "Crowdsourcing",
        "indices": [
          0,
          14
        ]
      }
    ]
  },
  {
    "text": "%Company Name%",
    "indices": [
      129,
      137
    ]
  }
],
"user_mentions": []
},
"in_reply_to_status_id_str": null,
"id": 245255511388336128,
"in_reply_to_user_id_str": null,
"source": "SocialOomph",
"favorited": false,
"in_reply_to_status_id": null,
"in_reply_to_user_id": null,
"retrived_count": 0,
    
```

V. RESULT

Now, after analyzing the posts and mentioned online we can come across with following outcomes. In figure 3 we have receive information of average daily mentions related to organization and their industry type. Here, we can easily come across about our daily mention of social media. By utilizing this analysis organizations can design their policies and also can take future decisions as well. We can also come across with information related to post whether it is business to business mention or business to customer mention or something other. After content analysis we can come across that which kind of hypothesis can be accepted to imply decisions related to firm.

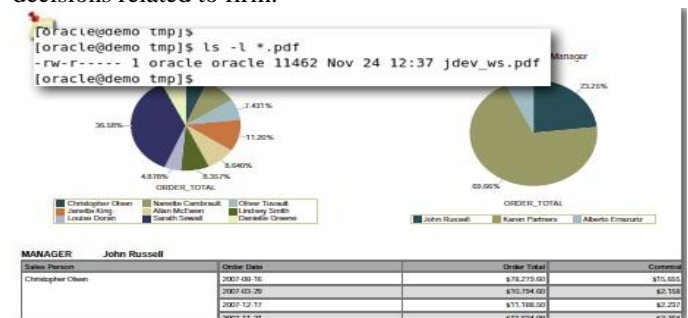


Fig. 4. Outcomes of Average Daily Mentions organization related on Social Media

VI. CONCLUSION

Automation of Social Media Analysis by Web Intelligence is very innovative idea for business decision making, government policy ravishment and many more. We can extend usage of social media by this. It is not only for social interaction but also for taking good business decisions related to organization internally and externally. Social media is one of the most significant ways where we can get real data which is in unstructured format unfortunately.

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