Road Safety Movement in Bangladesh: The Tweeted Perspective

Supervised by

Afsana Begum

Senior Lecturer

Department of Software Engineering

Daffodil International University

Submitted by

Md. Alamgir Hossain

ID: 151-35-920

Department of Software Engineering

Daffodil International University

This thesis report has been submitted in fulfillment of the requirements for the Degree of Bachelor of Science in Software Engineering.

Department of Software Engineering

Daffodil International University

Fall 2018

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APPROVAL

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This **thesis** titled "**Road Safety Movement in Bangladesh: The Tweeted Perspective**", submitted by **Md. Alamgir Hossain, ID:151-35-920** to the Department of Software Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Software Engineering and approved as to its style and contents.

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Professor and Head
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Faculty of Science and Information Technology
Daffodil International University

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I hereby declare that I have taken this thesis under the supervision of **Afsana Begum, Senior Lecturer, Department of Software Engineering, Daffodil International University.** Also declare that neither this thesis nor any part of this has been submitted elsewhere for award of any degree.

24/12/18

Md. Alamgir Hossain

ID: 151-35-920

Batch : 16th

Department of Software Engineering

Faculty of Science & Information Technology

Daffodil International University

Certified by:

24/12/2018

Afsana Begum

Senior Lecturer

Department of Software Engineering

Faculty of Science & Information Technology

Daffodil International University

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ACKNOWLEDGEMENT

At first, I am grateful to the almighty Allah to make me eligible to complete this thesis paper. Then I would like to thank my supervisor Afsana Begum, Senior Lecturer, Department of Software Engineering, Daffodil International University. I am very much grateful to her for her expert opinion, sincere and valuable guidance. It should be added that she highly encourage me all the time. I would like to thanks Dr. Touhid Bhuiyan, Professor and Head of the Department for his constant inspiration. I take this opportunity to record my sincere thanks to all of the faculty members of my department. Now, I would like to thank all of my friends who helped me in this work. Finally, I would like to thank to my parents along with my family members for their unconditional support, love and caring. Special thanks to Md. Fakrul Abedin Bhyuian from 13th batch and A.U.M. Tuhin from 16th batch of my Department for their valuable guidance.

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DEDICATION

For his unconditional sacrifice for me.

Md. Khorshed Alam Bhuiyan

My Brother

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ABSTRACT

Road safety movement in Bangladesh was the largest ever crowed public movement in Bangladesh. Due to accidental death of two college student, this movement raised. Like many other recent movement around the world we see a huge contribution of social media related to the protest. We can say, we see a parallel contribution of Twitter on every protest. May be it was “Arab Spring”, indigenous protest in Spain or any protest. We see the power of hashtags in all recent movements. In this paper we tried to give a comparative analysis between ground protest and Twitter. For Ground protest information we collect newspaper front page coverage because there is no way to collect information of that old days. After collecting newspaper old copies we try to find out what actually happened on that moment. We see the headlines of the newspaper and see how it reflects the ground protest. Then we make a percentage of these information. We make figure of them. Another information source was Twitter. Due to unavailability of Twitter information using API .We use a social media monitoring tool to collect Twitter hashtags information during the protest. After that we made a comparative analysis of newspapers coverage as ground protest nature and Twitter hashtags information’s. Finally we found a tight relationship between ground protest and Twitter activities.

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TABLE OF CONTENTS

APPROVAL ..... **i**
DECLARATION ..... **ii**
ACKNOWLEDGEMENT ..... **iii**
DEDICATION ..... **iv**
ABSTRACT ..... **v**
TABLE OF CONTENTS ..... **vi**
LIST OF FIGURES ..... **viii**
LIST OF TABLES ..... **ix**
CHAPTER 1: INTRODUCTION **1**
1.Introduction **1**
1.1 Background 1
1.2 Motivation of the Research 5
1.3 Problem Statements 5
1.4 Research Questions 6
1.5 Research objective 6
1.6 Research Scope 6
1.7 Thesis Organization 6
CHAPTER 2: LITERATURE REVIEW **8**
2.Literature Review **8**
2.1 Previous Related Works 8
2.2 Limitations of Previous Works 8
2.3 Summary 8
CHAPTER 3: RESEARCH METHODOLOGY **9**
3.Research Methodology **9**
3.1 Plan 9
3.2 Goal 9
3.3 Scope 9
3.4 Process Description 9
3.4.1 Newspaper 9
3.4.2 Twitter 10
3.5 Working Process Methodology 12

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3.6 Summary 12
CHAPTER 4: RESULTS AND DISCUSSION **13**
4. Result Analysis and Discussion **13**
4.1 General Comparison 13
4.1.1 Newspaper: 13
4.1.2 Twitter 15
4.1.3 General Comparison 17
4.2 Comparison in Brief 17
4.2.1 Newspaper 17
4.2.2 Twitter 20
4.2.3 Comparative Analysis 22
CHAPTER 5: CONCLUSION AND RECOMMENDATIONS **23**
5. Conclusion and Recommendations **23**
5.1 Findings and Contributions 23
5.2 Recommendations for Future Works 23
APPENDIX A **24**
REFERENCES **27**

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LIST OF FIGURES

Figure 1.1	Road Accident Across Bangladesh……...	2
Figure 1.2	Reasons Behind Road Accident……	3
Figure 3.1	Working Process Model……	12
Figure 4.1	Twitter Activities During Protest Period……...	15
Figure 4.2	Newspaper Coverage of Road Safety Movement ……	20
Figure 4.3	Screenshot of Hashtags Information from Brand24……	22

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LIST OF TABLES

Table 3.1	Newspaper circulation in Bangladesh……....	10
Table 3.2	Major Hashtags of Road Safety Movement……...	10
Table 4.1	Daily Newspaper Coverage……	14
Table 4.2	Twitter Activities during Protest Period…….	16

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CHAPTER 1: INTRODUCTION

1. Introduction

This is the first chapter of our thesis. In this chapter we explain the background of the thesis and also background of the movement. Background of the movement is very important to understand the movement in brief.

1.1 Background

The "Road Safety Protest" started on July 29, 2018 and later spread to all over the country. The protestors demanded ensurement of safe road in Bangladesh. It should be mention that over 2400 deaths on road in the running year [1].Over 25000 deaths on road in last 3 years [9]. About BDT 400 billion loss in a year due to road accident [2]. If there is no road accident in Bangladesh then the Gross Domestic Product (GDP) will increase 2-3% [2]. If anyone know these statistics then he/she can easily guess how important this protest was.

The protestors also shout for formulation and implementation of road safety laws .They are against of simple traffic laws. So they demands punishment of drivers who violating traffic laws [3]. The road safety protest started in July and peaked in the first week of August. The protestors started to go back on August 8 after formulation of new road safety law by the government. The government also announced a traffic week during the protest. The most significant outcome of the protest is change in driver recruitment and payment schemes. A huge rush also seen on Twitter during time. Lots of tweets were posted with relevant hashtags during the protest period like "#BangladeshStudentProtest","RoadSafetyMovement","WeDemandJustice","Bangladeh" etc

Details explanation behind the movement:

The road safety protest is a public blast of not have safety road all over the country [3]. Over 25000 people killed on roads in last 3 years. 25000 life is not a simple mathematics. Where a life is much more valuable than any other things but due to road accident 25000 killed just in 3 years. Look at the figure 1 given below [4].

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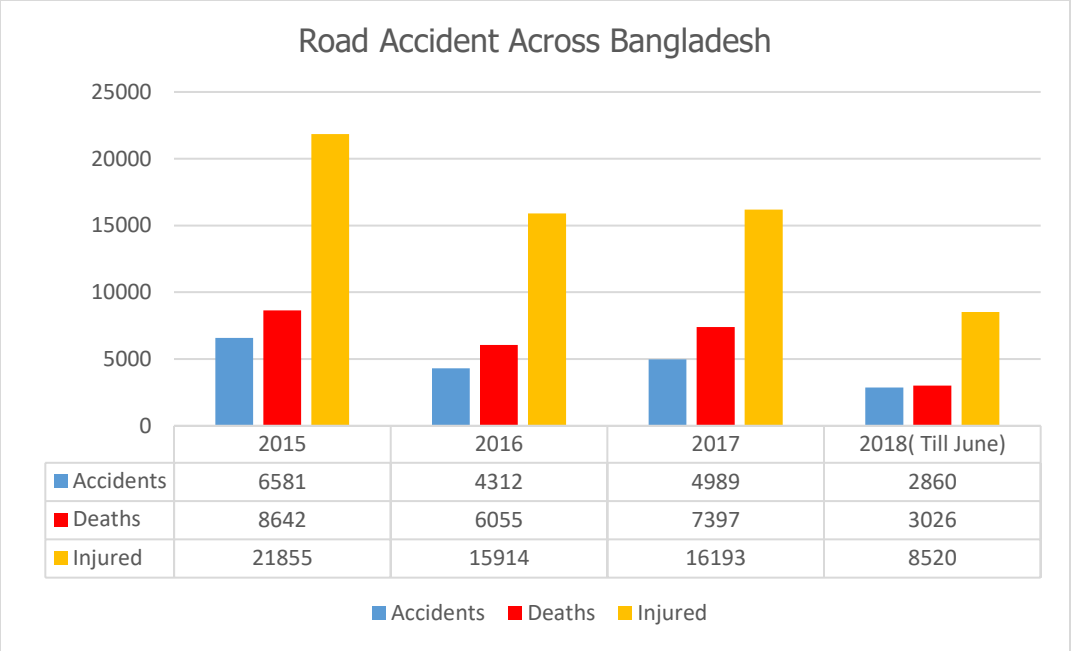

Figure 1.1 Road Accident Across Bangladesh

In the past three and a half year about 25,120 people died in road accidents. Anyone must be surprised when he/she notices that 20 people were killed in Bangladesh every day. That mean in every hour a life passed away [4].

A huge number of people approximately 62,482 people were injured in the road accidents in the three and a half years according to counting by Bangladesh Jatri Kalyan Samity – JKS (In English: Passengers Welfare Association) and the Accident Institute of BUET (Bangladesh University of Engineering Technology).Behind all of this only two reasons are responsible. Uncontrollable driving and higher speed are responsible for 90% of the incidents [4]. A figure is given below which represent the main reasons of road accident in Bangladesh.

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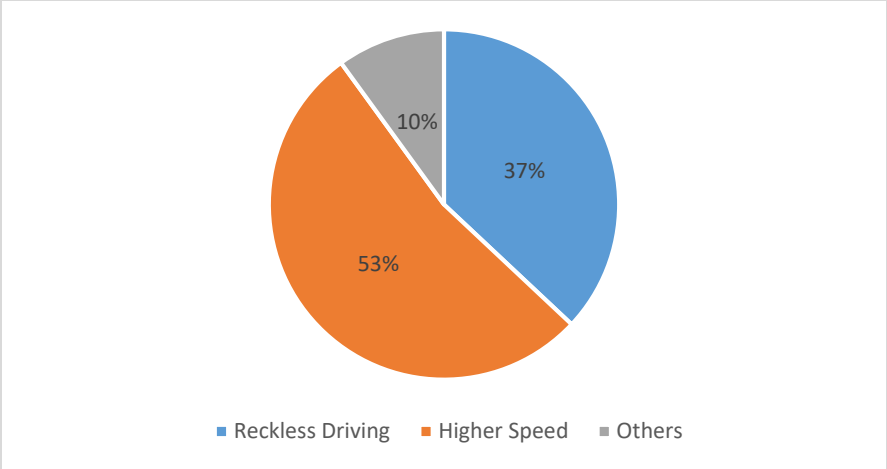

Figure 1.2 Reason Behind Road Accident

The sources included that most of the road accident victims, dead and injured persons were children, youth ,and working person - who are considered as earning members of the family as well as driving person of the national economy of the country. The sources also estimated that the annual losses due to road accident around BDT 400 billion. The figures of accidents were collected from reports in 10 national dailies, 6 online dallies along with 6 local televisions [4].

Nirapad Sarak Chai (We Demand Safe Road), an organization founded by the famous Bangla film actor Ilias Kanchan .They gave a figure at 13367 deaths and 19,158 injuries in the last three years. The number of incidents are larger than the previous one [4]. BUET's (Bangladesh University of Engineering Technology) Accident Research Institute (ARI) taken information from the police who kept the registered cases. But the arbitration are always unknown. According to ARI analysis the number of deaths is more than double in Dhaka Metropolitan areas than the other important cities. It is also notable that population and number of vehicles is too much in the capital. The ARI study also found that the 54 per cent of the victims belongs to 16 to 40 years age and 18 percent is under 15 years old. Due to accidents Bangladesh loses 2-3 percent of Gross Domestic Product (GDP).

Moreover, the government has no accurate data about road accident since the police keeps record does not register all the accidents. Young students of schools and colleges have been demonstrating for a week since the death of two students as a bus ran over them in the city on 29 July. Their rising for safer road looks much needed when anyone see the upper accident statistical information. During the Road safety protest, there were some key incidents which highly dominated the exchange of tweets related to the protests. First of all, we need to know the incidents in order to study their expressions. Road safety protest was started on July 29, 2018 caused by two college students of

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Shaheed Ramiz Uddin Cantonment College, killed by unlicensed driver who was racing to collect passengers. At least 12 people injured with these two dead students [5].

Before spread on Twitter firstly, it sparked on ground. The college students block roads on Airport road, Dhaka. The protestors demand safer road and strict traffic laws. But within some days the protest rapidly spread throughout the country [6]. Hundreds of students crowded into the streets on July 29, 2018 demanding justice for their friends. Jabal-e –Nur was the bus name who was responsible for the accident .But later it was revealed that 3 buses were involved in the incident. All three bus drivers were arrested, along with their assistant [7] [8].

Mr.Shahjahan Khan, Minister of Shipping, who is also the executive president of Bangladesh Road Transport Workers Federation, he said with his smiley face that a road crash has claimed 33 lives in neighbor country India but do they talk about like what we do? He was criticized by citizens of the country and they call for protest in other areas of the country. Protestors also started demanding his resignation [9]. The protest then diffused outside of the capital. It is very strange full that most of the protestor's age range is 13 to 19, a very young age. People of the country that their upcoming generation will be bless full and they follow the footprint of heroes of 1971 of the liberation war.

The protestors blocked roads at the major points and starting to check the legal documents and fitness certificates of all kind of vehicles throughout the country. The protestors gave 9 points as their demand [10]. To understand the protest nature these are very important for us. These points are:

- Capital punishment for uncontrolled drivers and provision must be included in the constitution.
- Shipping minister must withdraw his statement and apologize to the students.
- A foot over bridge or alternative arrangement must construct on the accident spot and construction must start within 7 days.
- Speed breakers in every accident prone points must arranged.
- The government has to take responsibility for the students killed or injured in road accidents.
- All intra city bus must stop and pick up students when they ask.
- Discounted fare for students in all over the country.

Member of the civil right organizations and Ilias Kanchan, Bangladeshi famous film actor, founder of the Nirapad Sarak Chai campaign expressed solidarity with protestors [18]. During the protest the government declare that all educational institutions would remain closed countrywide on 2 August, 2018. Ilias Kanchan call a human chain in Dhaka on 3 August, 2018. On August 5, students of Dhaka University blocked Shahbag Square and demanding resignation of the Shipping minister Shahjahan Khan. When the students came forward to Science Lab Square, police discharge the students with tear gas.

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Dozens of students were injured in Science Lab Square [10]. The protest then spread like air.

On August 6, 2018, PUSAB (Private University Students Alliance of Bangladesh) called demonstration in all private universities in Bangladesh [11]. At that moment all universities in Bangladesh also raise their voice for safety road. On that day, approximately 40 students were injured by polices tear gas and 10 people were arrested from private university campuses [12]. May be this is the peak day of road safety protest what we explain later.

Student of BRAC University boycott class on 8 August demanding release of the confined protestors. Vice Chancellor of World University of Bangladesh also raised his voice to release the protestors [13]. Founder of Drik Picture Gallery, Photographer Shahidul Alam was arrested for anti-government activities.

On that protest time many posts has been published on Twitter. These posts spread so fast with the ground protest. To collect ground protest condition of that protest period we follow the top newspapers in Bangladesh. Besides, On Twitter people use many hashtags to express solidarity with the protestors. We analyze the tweets exchanged during road safety protest among various users and we acquiesce that some of these hashtags were very popular in the protest period.

1.2 Motivation of the Research

Researchers have inspect the trends followed in Twitter to diffuse such social revolutions in order to fix the influence and span construct by them [14] [15]. We have seen that in recent movements Twitter directly influence the movements. As example we can say the Arab spring which started in Tunisia in December 2010. This revaluations diffuse very fast to another few Arab countries. Algeria, Syria, Jordan, Egypt, Yemen, Saudi Arabia, Palestine and Morocco was on the list [16]. Now a days peoples are more dependent on social media like Twitter, Facebook. If anyone see those Arab countries are rise by the social media, specially Twitter [17].

1.3 Problem Statements

It is really hard to analyze social media data. A lot of difficulties came front when we want to analyze tweets to study the inauguration and advancement of a revolution on parallel mainstream media and Twitter. First of all collecting a large number of tweets where all of them are older is really very difficult due to limited search option of Twitter. On the other hand Twitter authority enforce several confinement on mining tweets from Twitter website. On the other hand use of specific keyword or hashtags may not retrieve all of the data related to a topic. May be it helps in brainstorming search queries that as more queries as likely as desirable are selected, and possibility of retrieving non relevant keyword after data retrieval [18]. Another thing should be added that there is some

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ethical issues and legal issues when we collecting and retrieving data from Twitter. Sharing of dataset is prohibited under Twitters API terms of service [19].

1.4 Research Questions

- How can we collect hashtag information from Twitter?
- What are the valid source of information on ground protest?
- How can we compare two different media?

1.5 Research objective

There is a little amount of research done on this type of topic. One reason behind this is low availability of social media data what we mention before. As far as we got some paper they just described user's information and hashtag counting. In this paper, we focus on analyzing tweets and mainstream media coverage at the revolution time. Simply we can say that we show a comparative discussion on Twitter activities and newspaper coverage of a revolution widely known as road safety movement in Dhaka. Dhaka is the capital of Bangladesh .Bangladesh is a country of South Asian sub-continent. The road safety protest was run by the student of different educational institutions.

1.6 Research Scope

Our findings from previous research was limited. From there we see that they just explain user's data. Another things is now a days collecting data from social data is too much difficult. But we can collect information using some tools. On previous researchers the researcher never go to a comparative explanation. Sometimes mainstream media cannot explain everything what happen on the ground. May be this is the main demotivation behind not go to comparative discussion like we did. We focus on analyzing tweets and mainstream media coverage at the revolution time. Simply we can say that we show a comparative discussion on Twitter activities and newspaper coverage.

1.7 Thesis Organization

In chapter one we discuss the introduction part. In this part we have some crucial sub parts. In first part we give a huge description of road safety movement. We tried to show why peoples crowed on ground for demanding safety road across Bangladesh. We show some statistical evidence of road accident history of last 3 years. May be it seems not related with our research topic but it is important to understand why people sparked. Later on the section we discuss why we motivated to work of this kind of topic. Then we give problem statements of working with Twitter data. Then we give some research questions what we will try to solve later on discussion and analysis section. Then we give research objective and our scopes of this paper. In the second chapter we give some related works literature review. This will make clear that what kind of work done before and why we working on this topic. Then our chapter three will come which is the one of

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the most important segment of our paper. We show our research methodology on this section. Result and Discussion chapter will describe on chapter four after explaining research methodology on chapter three. After all of the chapter the final and conclusion section is chapter five. In this section we come to a conclusion of our thesis topic.

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CHAPTER 2: LITERATURE REVIEW

2. Literature Review

Well, to gather knowledge of our thesis topic we see that there is a huge gap of this type of research. We search on internet about this kind of work but we got few works only. These few works are explained in this section.

2.1 Previous Related Works

Los Twindignados: The Rise of the Indignados Movement on Twitter (Narseo Vallina-Rodriguez, Salvatore Scellato, Hamed Haddadi, Carl Forsell, Jon Crowcroft and Cecilia Mascolo): In this paper they analysis the 2011 regional and local elections in Spain and tried to show that mainstream political entities were reflected on Twitter by ground protest. They tried to show that online social media serves more than the mainstream media. And social media like Twitter is a very good platform for politicians to attract the mass people attention [14].

Shahbag Movement: The Tweeted Perspective (Vaskar Raychoudhury Divya Saxena Mayank Chaudhary Shivam Mangla): This paper is related to another known movement of Bangladesh. In this paper they study the nature of the movement and participant activities by analyzing about a million tweets [15].

Predicting Elections with Twitter: What 140 Characters Reveal about Political Statement (Andranik Tumasjan, Timm O. Sprenger, Philipp G. Sandner, Isabell M. Welpe): This study releted to the German federal election .They investigate political prepense and online activities and try to show a mirror analysis of them.They showed that Twitter is indeed used briefly for political prepense [20].

2.2 Limitations of Previous Works

After studied a lot of paper we just found these 3 papers related to our work. Following these papers we saw that they just analyze a movement's nature and explain users activates. No individual work are found that gives a comparative analysis between ground protest and Twitter activities.

2.3 Summary

After literature review we can say that we work with a very important things what a play important role in almost every protest of present days. Most perfectly we say that movements of this decade are impossible without the help of social media, like Twitter. In our paper we show how it works.

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CHAPTER 3: RESEARCH METHODOLOGY

3. Research Methodology

In this section we show how we collect our data from our source. We explain the whole process in this section. This is very important segment of a thesis paper.

3.1 Plan

Two types of data we have to use in our research. Our aim is to show a comparative relation of on Twitter and mainstream media of road safety movement in Bangladesh. For mainstream media we use daily national newspaper's front page coverage. And for Twitter data we use a social media analysis tool for collecting data accurately so far. We use both newspaper front page coverage and Twitter data.

3.2 Goal

Our goal is to collect newspaper coverage accurately and collect Twitter data from Brand24 (A social media monitoring tool). Then we compare both data as our comparative discussion.

3.3 Scope

From previous research we know that they just explain user's activity not the whole protest activity. But here we show protest activity both in ground protest and Twitter. We show how Twitter contribute in a public protest.

3.4 Process Description

We already said that we show a comparative analysis based discussion between ground protest and Twitter activities. So, in data collection period we have to follow two different methods for newspaper and Twitter.

3.4.1 Newspaper

Before come to explaining how we collect data from newspaper we have to know why we select these newspapers information. It means we just show a statistics how popular these newspaper are.

According to Department of Films & Publications there are 504 daily newspaper in Bangladesh [21]. About 17 notable daily Bengali newspaper and 9 English dailies are publish every day in Bangladesh [22]. Literally, it's not possible to analyze all of them. Another thing is old copies of newspaper aren't available as always. We try to collect at least 5 newspaper old copies from both internet and the newspaper office. This is actually a tough thing to collect the protest time newspaper copies. The protest was held from July 29, 2018 to August 8, 2018. We collect newspaper copies of these days and also one day extra because newspaper publish on the next day. We also try to understand after protest condition. We collect country's top newspaper Prothom Alo also with The Daily Ittefaq, The daily Jugantor, The Daily Bhorer Kagoj and The Daily Star. The Daily Star is the popular English daily newspaper in Bangladesh. Table 2 shows the circulation of these 5 newspapers. Reason behind adding this table that we want to show the circulation number of these newspaper are huge.

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Table 3.1: Newspaper circulation in Bangladesh.

Rank	Name	Founded	Circulation
1	Prothom Alo	1998	501800
2	The daily Jugantor	1999	290200
3	The Daily Ittefaq	1953	290200
4	Bhorer Kagoj	1992	161160
5	The Daily Star	1991	44814

3.4.2 Twitter

In order to understand the spread of the road safety protest through Twitter, we need to collect a large volume of tweets, related to the protest, exchanged during the peak period of the protest. We see some hashtags are used rapidly during the protest.

Table 3.2: Major Hashtags of Road Safety Movement.

Hash Tag	**Description**
#BangladeshStudentProtest	Represent the whole protest as Bangladesh student protest.
#RoadSafetyMovement	The protestor's main demand is safety road in all over the country. This a movement of Bangladeshi students who demanding safer road
#bangladesh	The people's republic of Bangladesh. By this hashtag protestors mention their country name.
#RoadSafety	Demanding safety road in Bangladesh. Here BD is Bangladesh's short form.
#RoadSafetyBD	Demanding justice for two killed student of Shaheed Ramiz Uddin Cantonment College at airport road.
#WeDemandJustice	Protestors seek attention of international media. So we see sometimes they mention international newspaper with protest related hashtags.
#WeWantJustice	Justice for two killed student at airport road.
#bbc #cnn #bbcnews #nytimes #Aljazeera	International Newspaper

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As already said in section 1, Twitter data mining is difficult due to different challenges. Existing Twitter search is inadequate in finding tweets posted of months or even a weeks ago. For this problem people used Topsy API at past but now there is no API available like this. Topsy is dead now [23]. Topsy was a Twitter certified search portal which allowed people to search non real time Twitter content, i.e., older tweets. Due to unavailability of data collection we use a social media analysis tool. This tool work as what Topsy API did. Brand24, Keyhole.co, buzzsumo.com, tweetreach.com, buffer.com are example of social media analytics tools [23]. We use Brand24 as a social analytics tool in our paper.

Brand24 is a Polish social media monitoring tool from 2011.Since, we needed to collect huge number of older tweets from Twitter, and it became difficult due to tools limited edition.

3.4.2.1 Brand24 Working Processes

Brand 24 use an API for social media monitoring. We got twitter mentions from Brand24. After installing it as a package first need to require it in a variable. To set up the API two things need one is account id which is available after registering to the Brand 24, another is API key which will also auto generate or need to generate manually after being a registered user of Brand 24. To set up, two methods which are under Brand24 objects that is already required before need to call and pass the account id and API key as parameters.

3.4.2.2 Pseudocodes

Codes are appear on Appendix A.

3.4.2.3 Brand24 Features

Here is the some feature that Brand24 use:

- Mentions Feed: Analysis of specific topic .i.e., hashtag analysis. We collect twitter mentions by this tool.
- Discussion Volume Chart: Identify changes of a specific period. Like we want to see changes of protest.
- Mention Analytics: Understanding who is talking about our relevant hashtags.
- Filtering: We can filter time, source, and many other things by this.

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3.5 Working Process Methodology

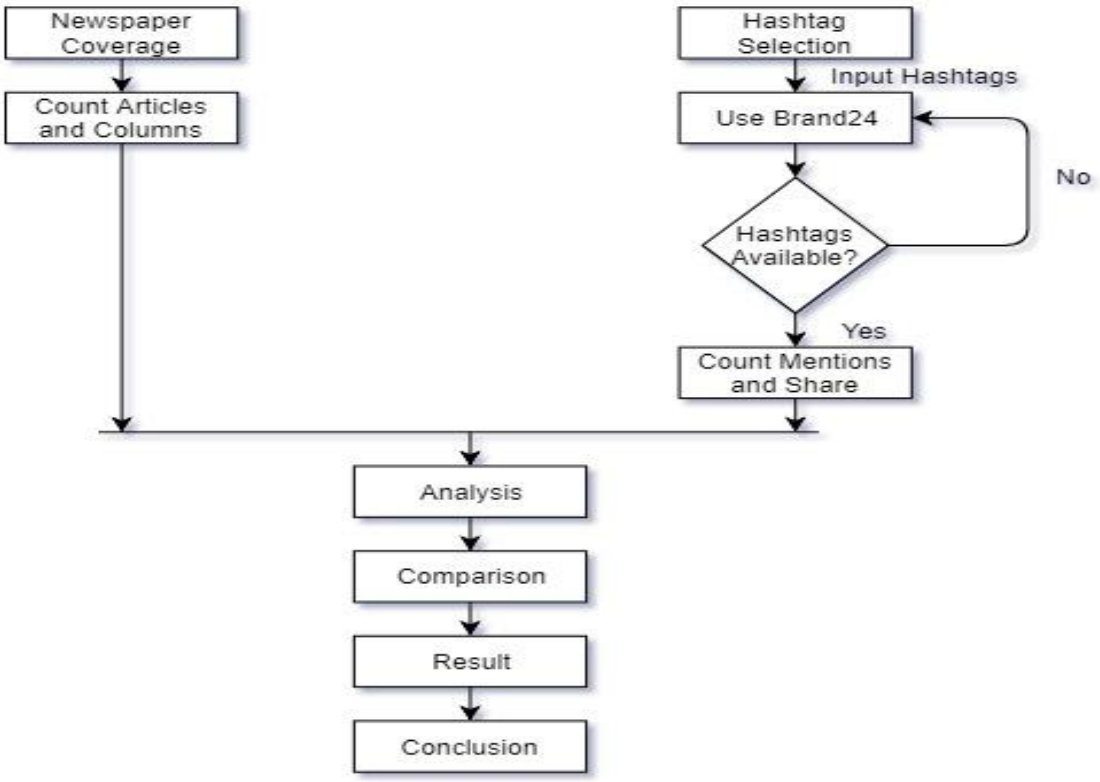

Figure 3.1 Working Process Model

Firstly we collection newspaper coverage, count articles and columns. Then we count words from the articles. After that we select Twitter hashtags information from Brand24 then we compare these two .Finally, we show is really Twitter and ground protest run parallel?

3.6 Summary

For our work we collect information from the daily newspapers of Bangladesh. We collect their front page coverage. We use Twitter mention and number of social media reach to understand the protest nature on Twitter.

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CHAPTER 4: RESULTS AND DISCUSSION

4. Result Analysis and Discussion

In this section we discuss along with our findings .We describe our all data of movement period. Note that July 29, 2018 to August 9, 2018 was our data collection period. We collect newspapers coverage manually and use a social media monitoring tool for collecting Twitter information's.

4.1 General Comparison

For easy understanding, we first explain a single newspapers information briefly and also Twitter data. But we use a collection of top 5 hashtags as keyword on Brand24. Here in the following table we use Bangladesh's most famous newspapers front page information and top 5 hashtags.

4.1.1 Newspaper:

We collect the all newspapers from July 29, 2018 to August 9, 2018. There is no news on the protest start day because the daily newspapers are publish on next day. So we don't have any news on July 29. Our analysis period starts from July 30 and ended on August 9. We collect information after later day and end with extra one day of the protest time. As if, Twitter data's are available on the same day. In this data description section we just consider the country's top newspaper Prothom Alo. It is already proved that Prothom Alo is one of the top circulated newspaper in Bangladesh [22].

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Table 4.1 Daily Newspaper coverage

Date	No of Column	% of Columns	No of Article	% of Articles	Comment
Jul 29	0	0	0	0	• Protest begging day.
Jul 30	3/6	50	2/6	33	• Main headline. • And protest already started.
Jul 31	2/7	33	5/8	63	• An editorial
Aug 1	3/6	50	3/6	50	• Headline (Daily till 7 August)
Aug 2	All	100	6/6	100	• Bus labors attacks students. • On that day all educational institute scheduled to off by the Ministry of education
Aug 3	All	100	6/6	100	• 43 another districts on protest. • Prime Minister meet with killed students family
Aug 4	All	100	7/7	100	• Publish a statistics of 25000 deaths on last 3 years
Aug 5	All	100	8/8	100	• Attack on students • At least 100 students were injured. • 11 police cases to Students. • Strike by the transport authority.
Aug 6	All	100	7/7	100	• PM Speaks • Attack on students • New rules on cabinet table.
Aug 7	All	100	6/6	100	• New rule • PM speaks
Aug8	5/6	83	4/5	80	• Scenario changed
Aug 9	4/6	66	3/6	50	• Ground is cool but still get coverage.

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Look at the table, as we said before there was no protest news on July 29, 2018. But after that day, the protest news keep dominance on the newspaper. From July 31, 2018 to August 9, everyday protest news keep dominance. Prothom Alo's all columns are reserved for protest news. Almost all front page headlines are related to road safety protest news. Some days, the editorial also written on road safety protest. Even they started to write analytical article on road safety and road accident history in Bangladesh.

From August 2 to August 7 everything on front page of the newspaper was related to road safety protest. Not only was this newspaper the scenario almost same in all newspaper. In fact, the article headlines also same.

On August 4, Prothom Alo publish an analytical article .Honorable Prime Minister of Bangladesh also talk about the protest. Its proves the importance of the protest. We talk about the protestor demand new rule for safer road. Yes, the protestors won when government pass new road safety rules on the cabinet.

4.1.2 Twitter

When use our top hashtags already mentioned in table 1 then we got the Figure 3. Figure 3 gives data of total number of mention and total number of social media reach.

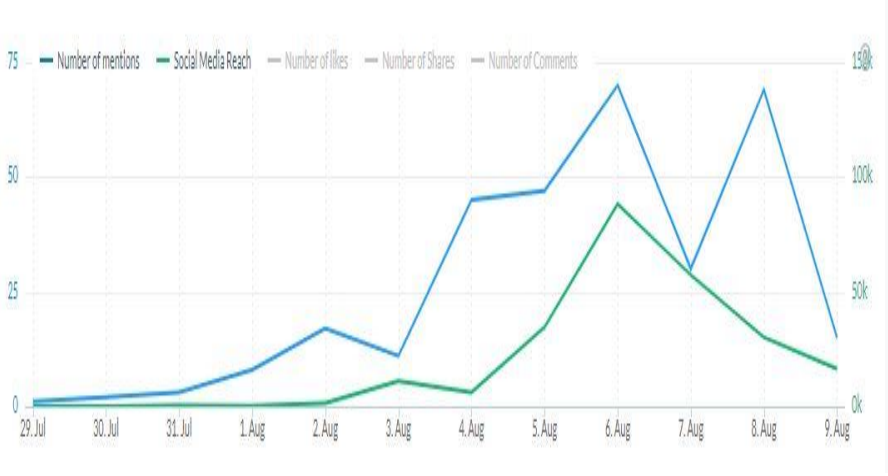

Figure 4.1 Twitter Activities during Protest Period

The following Table 4.2 reflects the figure 4.1

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Table 4.2 Twitter Activities during Protest Period

Date	Number of mentions	Number of reach
July 29	1	7
July 30	2	10
July 31	3	490
August 1	8	218
August 2	17	1361
August 3	11	11048
August 4	45	6083
August 5	47	34532
August 6	70	88290
August 7	30	57323
August 8	69	30123
August 9	15	16497

Figure 4.1 shows that the distribution of the tweets mentioned by different Twitter users. In this figure we sum up with top 5 hashtags related to road safety protest. We already mentioned that road safety protest was held on July 29, 2018 to August 9, 2018 (Actually end on August 8, 2018.We extended one day extra to compare post protest period).

Now come back to figure 3.At the starting day only 1 mention of our mentioned hashtags and its reach only 7 users timeline. Gradually it was increased with a new day. On last two days of July total number of mention were respectively 2 and 3 and number of reach on Twitter users timeline were 10 and 490.Just in a day social media reach boomed up to 490! From July's 1st day mention run fast following the last day of July. On August 3, total number of mention was11 but it reached to 11048 people's timeline. On next two days of August 3 the number of mention were 45 and 47 and social media reach were 6083.

Mark the day 6 of August the mention was the highest 70 and social media reach was 88290. Remember the first day of the protest that had only 1 mention and 7 social media reach. The next 3 days of August mentioned hashtags number were respectively 30, 69 and 15 times. It's also notable that number of social media reach of these days are respectively 57323, 30123 and 16497. Day by these hashtags related to the protest were ruled the Twitter. Even hashtags keep attention while the protest over. Mainly August 4 to August 8 was the peak time of the road safety protest.

First few days, most of the tweets have been sent by a handful of users while most users sent just a little number of tweets. This distribution are common in everywhere. Most of the protestors actually post a tweet to declare their presence. But when it go viral then the protest keep attention of the whole website platform. #RoadSafetyBD, #Bangladesh and #BangladeshStudentProtests these 3 hashtags were trending of that time [24].

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4.1.3 General Comparison

We see in newspaper section that the red marked days were top sounds days for road safety protest. We almost find the same in Twitter data analysis.

Now, if we want to compare newspaper and Twitter then we should know that newspaper are circulated on the next day. Moreover, people use Twitter and post on the same day.

So, we want to explain data from table 3 and table 4 .First we talk about twitter data then we explain what newspaper cover on the next day. August 2 to August 7, we see in this 6 days whatever published in the newspaper but the front page is all about road safety movement. All columns and all articles were related to the movement. We see that the protest get 100% coverage on that 6 days. Now see what actually happen on Twitter on these days .After that we give a twitter data table .We got this data from brand24 .We also attach brand24's screenshots.

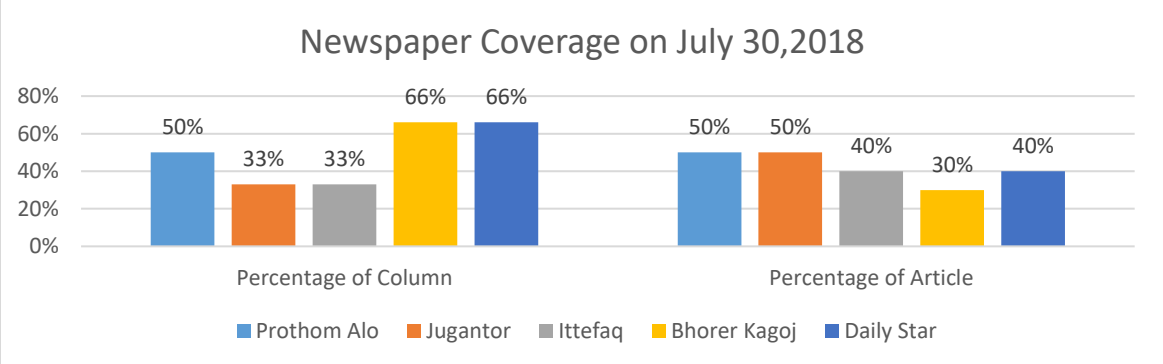
Before August 2, everything was cool in Newspaper about the protest. When bus labor attacks on students on next newspapers this was highlighted too much and start getting attention. But on that day twitter was more than cool. Only 8 mentions and 218 social media reach. On August 3, we saw that the protest diffused another 43 districts. Related that day, we found 13 Twitter mention and 1361 social media reach. This time we saw peoples contribution on the Twitter increased highly.

4.2 Comparison in Brief

In this part we give all 5 newspapers front page coverage as figure. We calculate them a scale of 100 for level playing analysis.

4.2.1 Newspaper

We use countries top 5 newspapers front page coverage. For this we use their website to find out the old copies of the newspaper. So, the following figures information's are valid and this copies are available all time.



(a)

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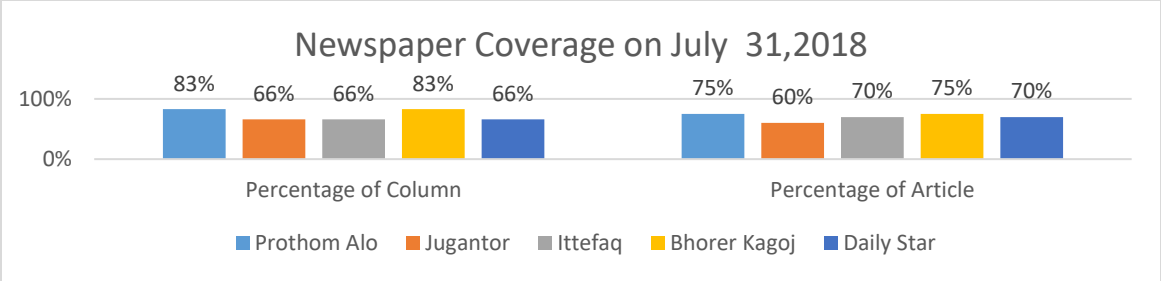
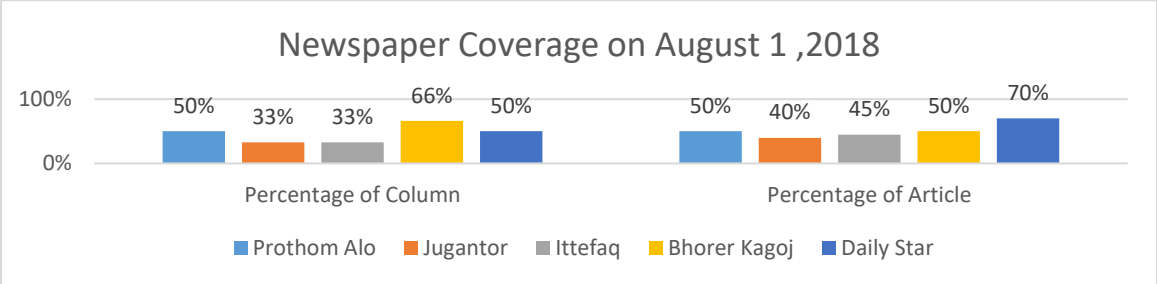
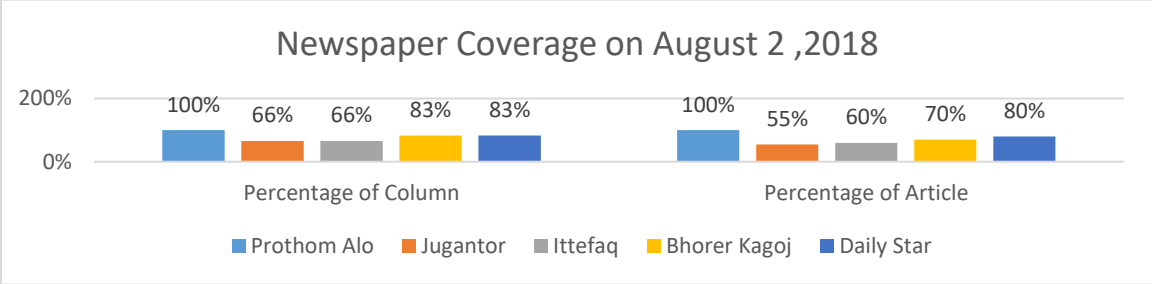


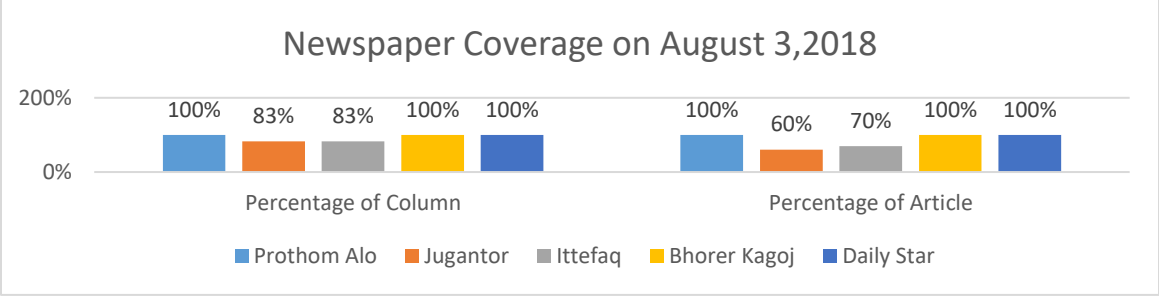
(b)



(c)



(d)



(e)

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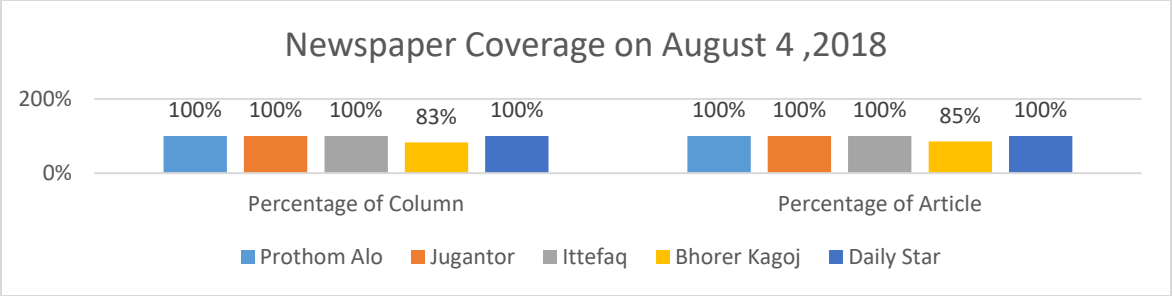
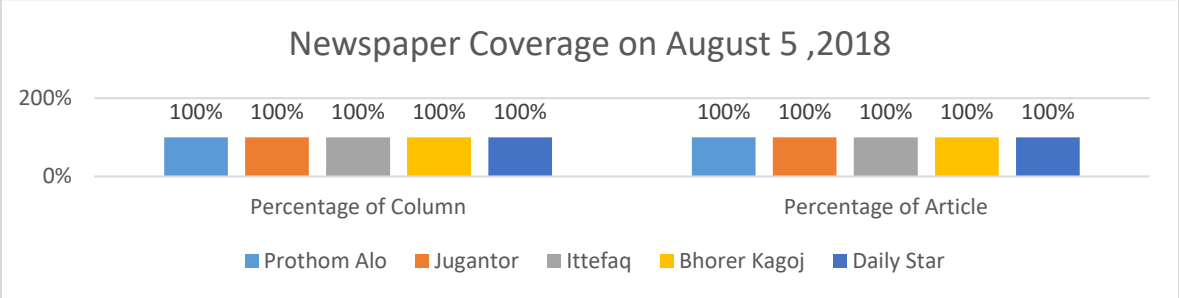
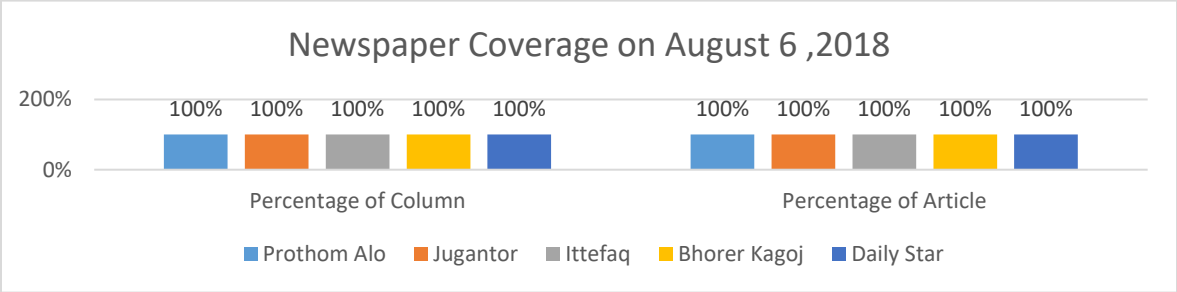


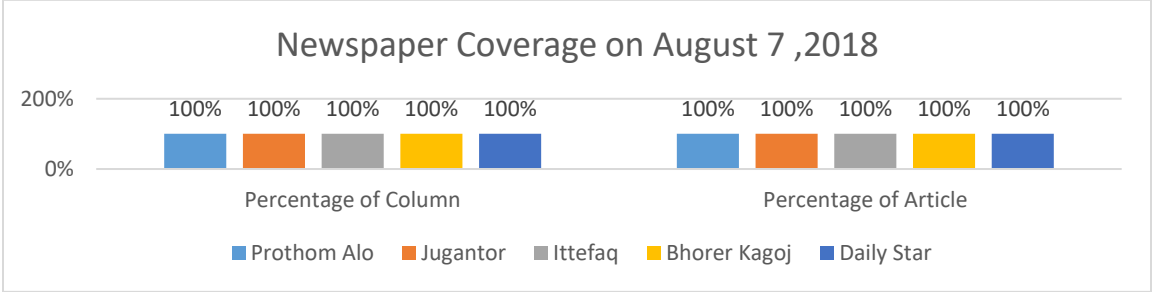
(f)



(g)



(h)



(i)

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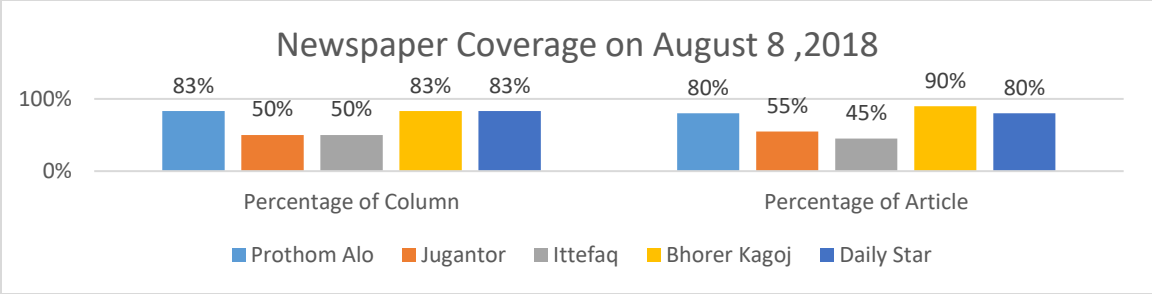
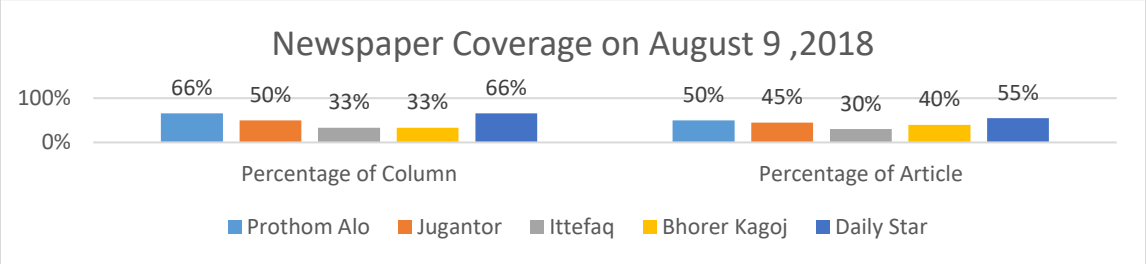


(j)



(k)

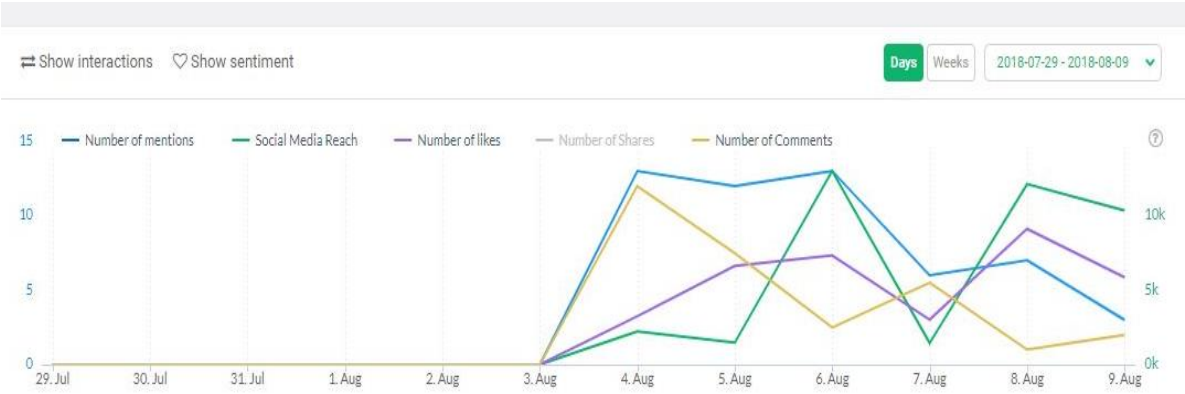
Figure 4.2 Newspaper Coverage of Road Safety Movement

We show top 5 newspapers coverage on the figure. On the protest day news we see the next day newspaper got coverage 33-66% column and 30-50% article was about road safety movement. But in the next day it was less than the first day.

One thing clear from the above figure f, g, h, i who represent dates 4,5,6,7 August. These days the protest got 100% coverage. Both in article and column. It means everything on the newspaper are related to the protest.

4.2.2 Twitter

In this section we give top 5 hashtags information of July 29, 2018 to August 9, 2018. These figures are collected from Brand24.The quality of these pictures may be poor. But we try our best to collect the best quality.



(a) #BangladeshStudentProtest

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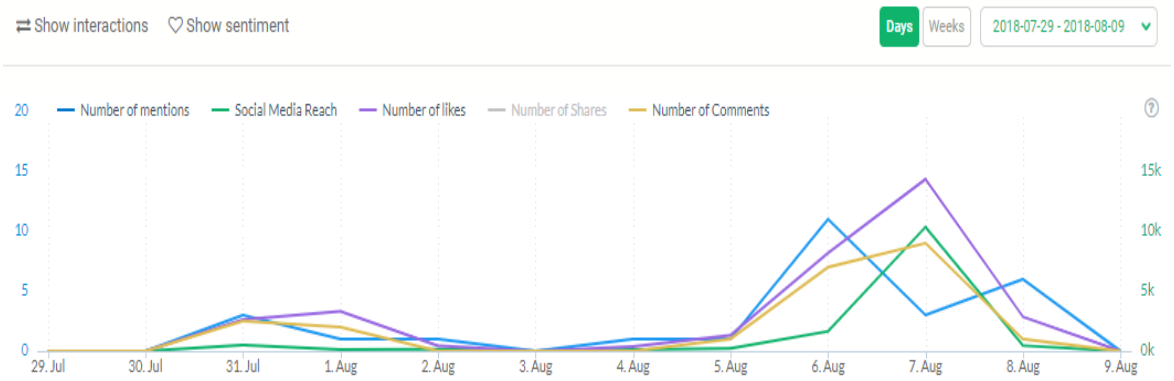
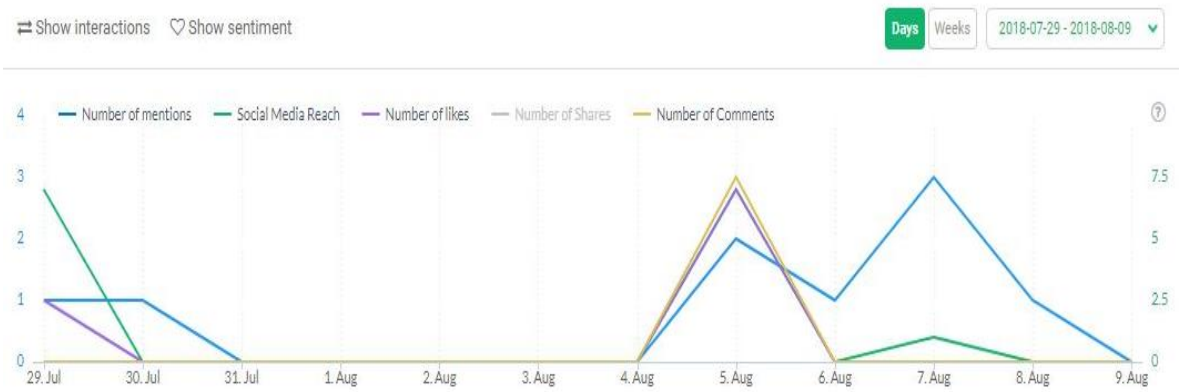
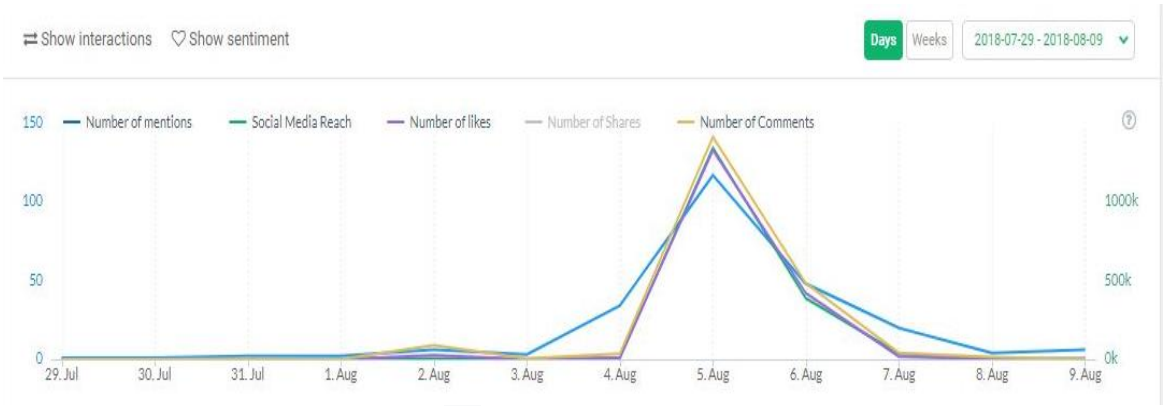


(b) #roadsafetymovement



(c) #roadsafety



(d) #RoadSafetyBD

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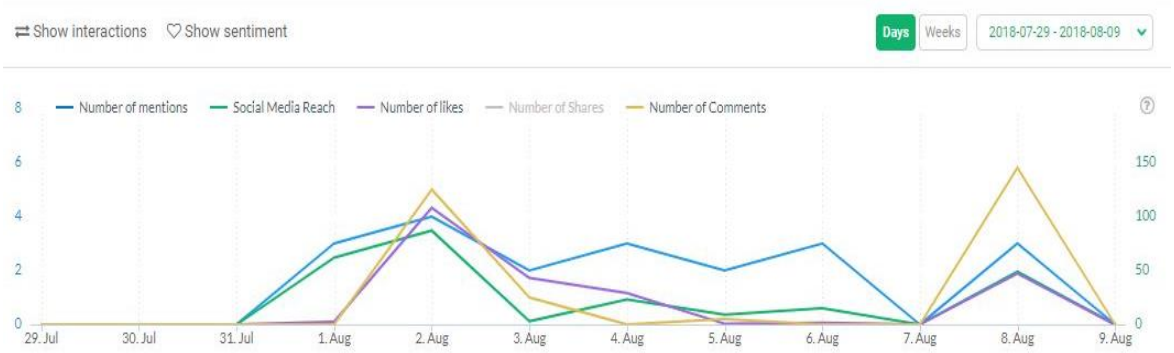

(e) #bangladesh

Figure 4.3 Screenshot of Hashtags Information from Brand24

On top we show the figure of top 5 hashtags collected by the tool Brand24.On these figure we see that August 4 to August 7, these four days they got most mentions. We see the line is high on these days. .

4.2.3 Comparative Analysis

Newspaper Coverage section and Individual hashtags usages distribution are details explanation of our collected information. Now we explaining in details. After seeing figure of newspaper coverage of front page and individual hashtags figure of twitter we see that peak days of the protest were 4 August, 5 August ,6 August, 7 August of 2018. On these days the protest got maximum coverage. On 4 August, Attack on students and at least 100 students were injured in Jigatola. And 11 police cases against students. So we can say this day was a hot day on ground. Another thing on this day transport authority call a Strike.

Next day of August 5 was August 6, new rules on cabinet table and Prime Minister of Bangladesh gave a speech .So for new rules this day also keep attention both in twitter and newspaper.

Like this days, when the ground protest spark more then it feels on twitter. So, we can say easily with the given analysis that on Twitter protestors keep footprint like on the ground.

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CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

5. Conclusion and Recommendations

In this paper, we have studied how Road safety movement spread Twitter through like the ground protest across all over the country. In depth analysis we show the information of newspaper and information of hashtags. After a comparative study of these two we have that the ground protest and protest on Twitter go on parallels most of the time. It indicates that if twitter contribute on the protest then success can comes too fast and it keep attention of all of citizen of the country .Not only in country. It spread all over the world through Twitter. Because there is no geo locational boundary on Twitter.

5.1 Findings and Contributions

Now a days ground protest boosted up by Twitter. We prove that when the protest got maximum attention in Twitter after that day the protest got highest coverage. In this paper we got some points after analysis. These are –

- We found that the real world incidents related to Road safety protest are being simulated perfectly in the Twitter. E.g., Twitter activities consistently boosted up if something special with relation to the protests happened in or around Dhaka.
- We found that the protest significantly focused on twitter as it crowded on the ground.
- We found that when Twitter activities is high then newspaper coverage is also high.
- We compare and found that a perfect reflection on Twitter of the protest.

5.2 Recommendations for Future Works

Though we work just only with Twitter but we could not disaccord that Facebook is one of the most powerful social media. In Bangladesh, users of Facebook is more than Twitter. If we work with Facebook data then we understand more easily of the protest nature. But it really hard to work with Facebook data for its hard terms and conditions. If it will be available we work with the following title using Facebook data.

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APPENDIX A

Brand24 uses following JavaScript code to get mentions from Twitter:

- Get Mentions

```
var Brand24 = require('brand24-api-nodejs')

var accountId = 12345
var apiKey = 'xxx'

var client = Brand24.createClient(accountId, apiKey)
var api = Brand24.createTransport(client)

var projectId = 12345

api.get('/results', {
   sid: projectId,
   count: 15
}, function(err, result) {

   if(null === err) {
      console.log("Results:")
      console.log(require('util').inspect(result, true, 10))
   }
   else {
      console.log("Error occured:")
      console.log(err)
   }
```


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```
})
```

- Get Mentions Count

```
var Brand24 = require('brand24-api-nodejs')

var accountId = 12345
var apiKey = 'xxx'

var client = Brand24.createClient(accountId, apiKey)
var api = Brand24.createTransport(client)

var projectId = 12345

api.request('GET', '/results-count', {
    sid: projectId,
    d1: '2014-01-01',
    d2: '2014-01-30',
    group: 'day'
}, function(err, result) {

    if(null === err) {
        console.log("Results:")
        console.log(require('util').inspect(result, true, 10))
    }
    else {
        console.log("Error occured:")
        console.log(err)
```


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```
    }
})
```


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