



National Security Solutions

Welcome!

Text Analysis Using Twitter: A Case Study in Dhaka

June 16, 2014

By Cadet James Cho and the Data Science Team



The Power of Partnership - from Vision to Reality



Background



Class Year and Cadet Company: 2016, CO A4

Major & Engineering Track: Engineering Management Major (Environmental Track) and Applied Statistics Minor.

Top 3 Branch Choices: Aviation, Military Intelligence, Cyber

Sport: West Point Club Soccer Team

Academic Individual Advance Development – an internship without being paid



Research Questions

Can we use Twitter to gauge stability in the PACOM region?

What is the best way to quantitatively measure sentiment?





PACOM



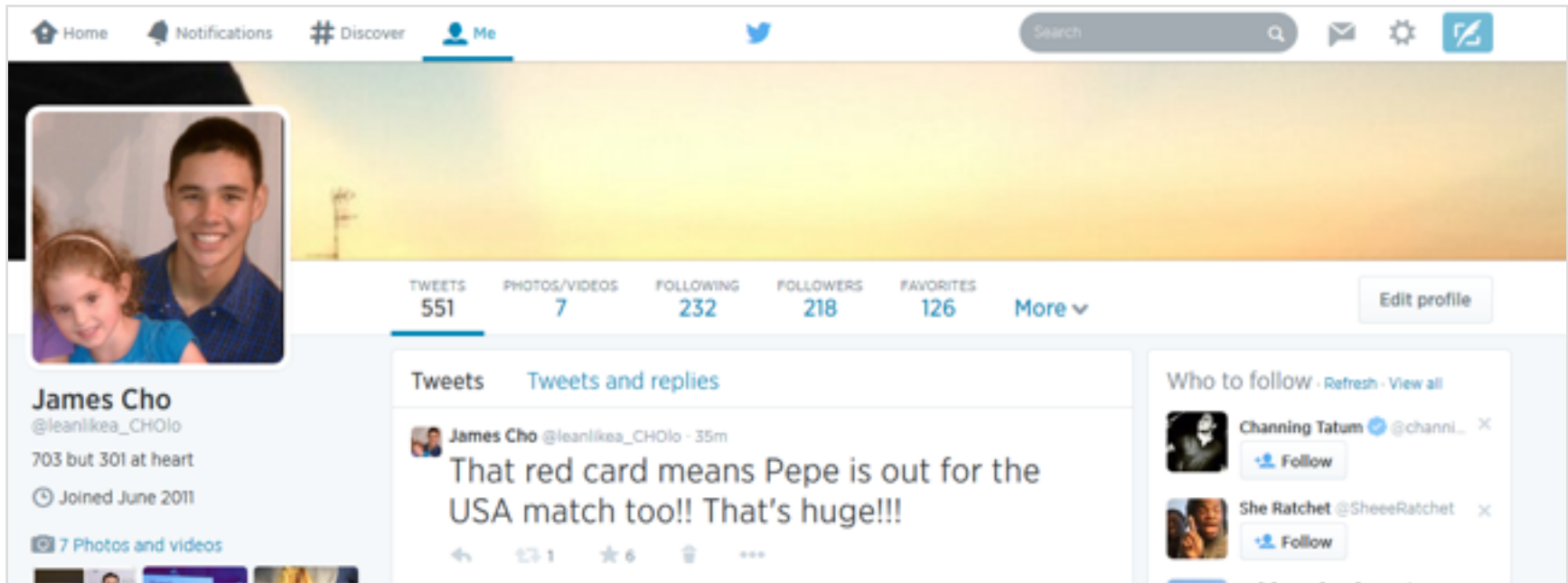
PACOM - committed to enhancing stability in the Asia-Pacific region by promoting security cooperation, encouraging peaceful development, responding to contingencies, deterring aggression, and, when necessary, fighting to win.




“Information engagement can communicate critical knowledge, build trust, promote support for U.S. operations, and influence the perceptions and behaviors of many audiences” - Report of the Defense Science Board Task Force on Understanding Human Dynamics



What is Twitter?







 **World Cup 2014** @PostWorldCup · Jun 13

There were 12.2 million tweets sent during last night's first World Cup game.

203,333 tweets every minute.

3,389 tweets every second.

  69  112 



Information Resources

Authoritative News vs Twitter



Foreign Minister Sushma Swaraj to ratify border pact with ...
[Economic Times](#) - Jun 12, 2014
 NEW DELHI: The stage is set for India and Bangladesh to ratify a ... thus making the highly incongruous and porous Indo-Bangla border more ...

Myanmar, Bangladesh border guards pledge cooperation

[Myanmar Times](#) - Jun 14, 2014

Myanmar and Bangladesh have reached an "in principle" agreement to open liaison offices on the border and increase security cooperation in ...



Bangladesh-Myanmar border crisis

[The Daily Star](#) - Jun 3, 2014

WHAT happened on 28 May at Naikhanchori on the Bangladesh Myanmar border was most unfortunate and totally unwarranted. Unprovoked ...

BGB chief scheduled to visit Burma next week

[International - Burma News International](#) - Jun 4, 2014

[Explore in depth](#) (16 more articles)



Myanmar, Bangladesh Vow Better Border Cooperation aft...

[Nahamet](#) - Jun 12, 2014

Myanmar and Bangladeshi authorities Thursday vowed to strengthen border security and combat "illegal armed groups and criminals" ...

Bangladesh coastguard rescues 300 migrants stranded at sea

[Zee News](#) - Jun 11, 2014

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Bangladesh News @BDnews · Jun 13

Myanmar-Bangladesh to tighten border security - [Aljazeera.com bit.ly/1xTybu4](#)
 #Bangladesh

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Reply Retweet Favorite More



AmitNimade @amitnimade · Jun 12

#CRIC Nadir Shah, the Bangladesh umpire who was banned for 10 years by the BCB in March 2013 on charges ... [es.pn/1ljSrZD](#) #News

[View summary](#)

Reply Retweet Favorite More



डॉ अचिन्नेश मिश्र @dharma_sanAtana · Jun 11

"@KanchanGupta: 117 year old Bangladeshi marries a 22 year old woman. Via @hstapanghosh [sangbad24.net/single.php?id=...](#) (Dhaka)"RT
 Truly followin PBUH

Expand

Reply Retweet Favorite More

About the Data...



```
object<-searchTwitter("Bangladesh",n=500,cainfo="C:/Twitter_Downloads/cacert.pem")
```

June 11 – June 13

Limitations

2 datasets: one broadly bangladesh (n=1700)
and one dhaka (n=1100)

During Data Collection



Foreign Minister Sushma Swaraj to ratify border pact with ...
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Today (16 June 2014)



Bangladesh vs. India, 2nd ODI: Date, Time, Live Stream, T...
[Bleacher Report](#) - 6 hours ago

India have a 1-0 lead in their three-match ODI series against Bangladesh. It's a must-win for Bangladesh if they hope to stay alive in the series.

India aim to complete series win against Bangladesh on Tuesday
[Zee News](#) - 10 hours ago

India vs Bangladesh 2nd ODI, Preview: Can Bangladesh save the ...
 International - [India.com](#) - 3 hours ago

Bangladesh can't find a way out of slump

In-Depth - [ESPNcricinfo.com](#) - 1 hour ago

1st ODI, Highlights: India Brave Rain to Beat Bangladesh By Seven ...

Blog - [NDTV](#) - Jun 15, 2014

Series vs Bangladesh Big Opportunity to Express Yourself: Ajinkya ...

International - [NDTVSports.com \(blog\)](#) - 1 hour ago



[India.com](#)



[ESPNcricinfo...](#)



[IBNLive](#)



[Indian Express](#)



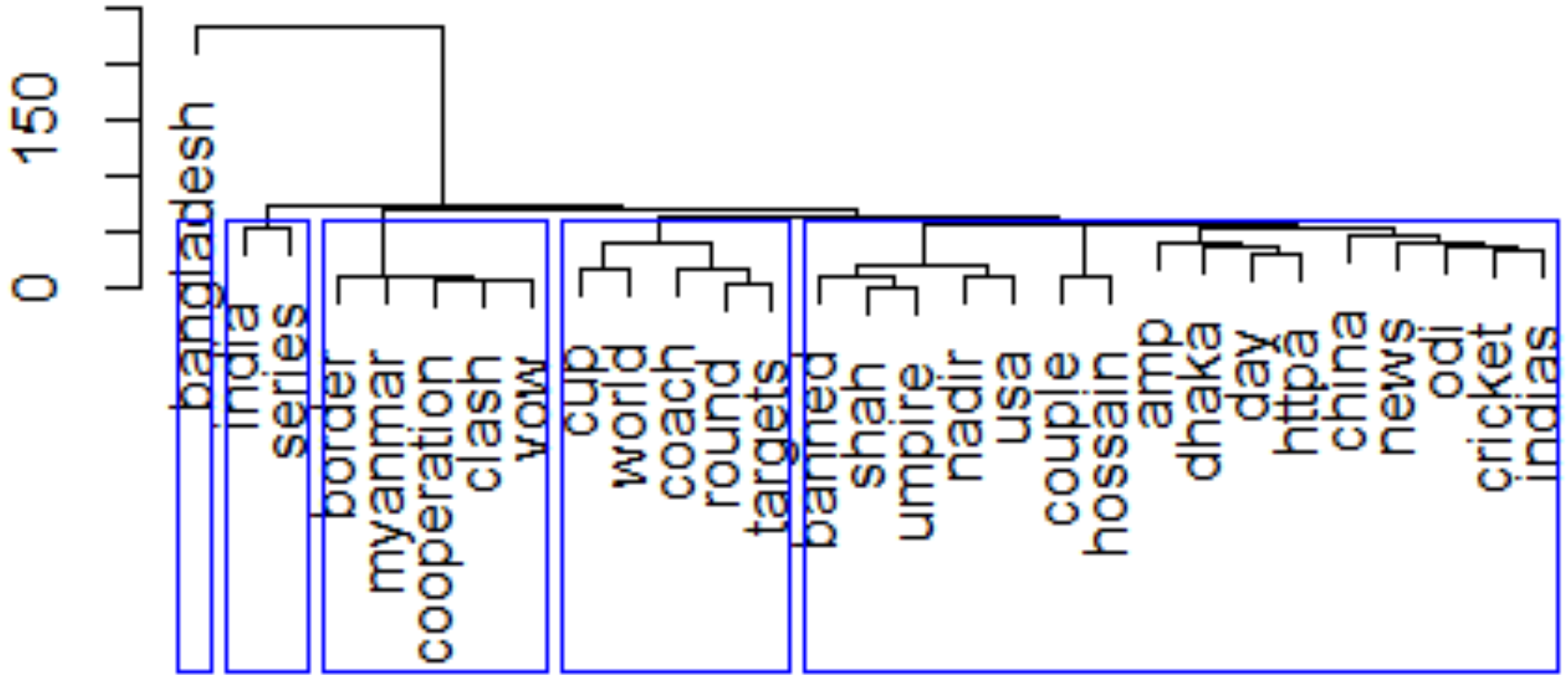
[Financial Ex...](#)



[Economic TI...](#)

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Sifting through the data...





Sentiment Analysis

sum(bang.score\$pos)

183

sum(bang.score\$neg)

171

Raw Score:

+12

Negative Sentiment Ratio:

10%

sum(dhaka.score\$pos)

157

sum(dhaka.score\$neg)

245

Raw Score:

-88

Negative Sentiment Ratio:

22%



National Security Solutions

Questions?

Homepage: <http://www.data-tactics.com>

Blog: <http://datatactics.blogspot.com>