



REAL-TIME ANALYTICS FOR THE US 2020 ELECTIONS

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Agenda

I. US Elections 2020

II. Social Media as a Political Tool

III. Real-time Insights use cases

IV. Tool Capabilities

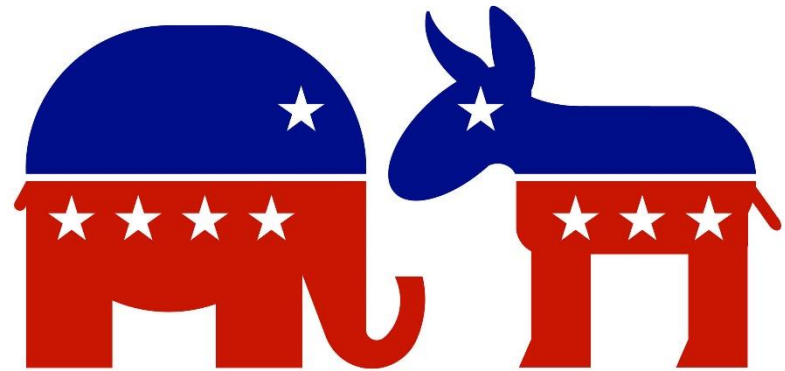
- Sentiment Analysis - Word Count
- Sentiment Analysis - Word Count

V. Conclusion and Q&A



I. US Elections 2020: Race Against Time

- 59th quadrennial US elections
- Date: November 3, 2020
- 2 parties:
 - Republican Party
 - Democratic Party



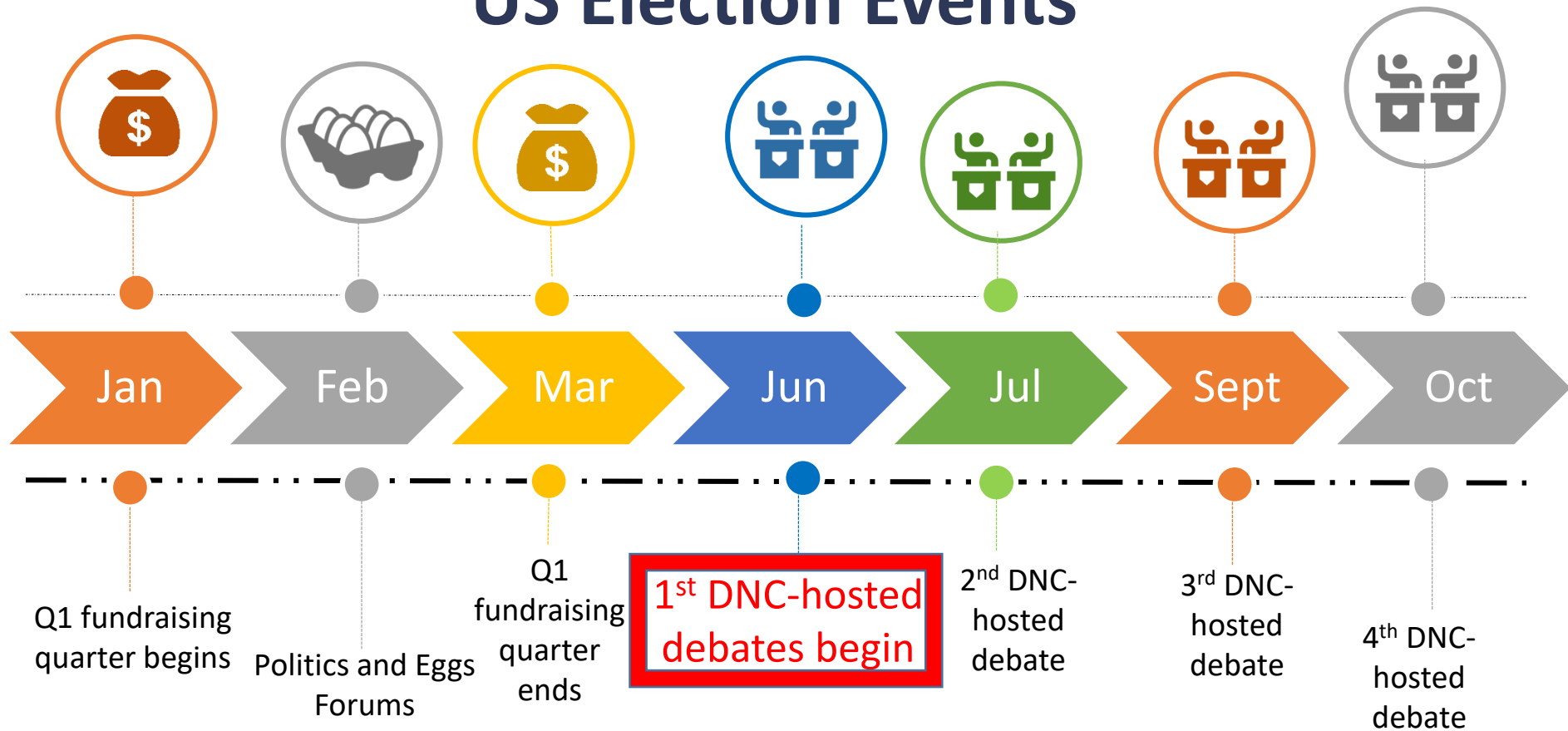
Candidates

24 Democrats

2 Republicans



US Election Events



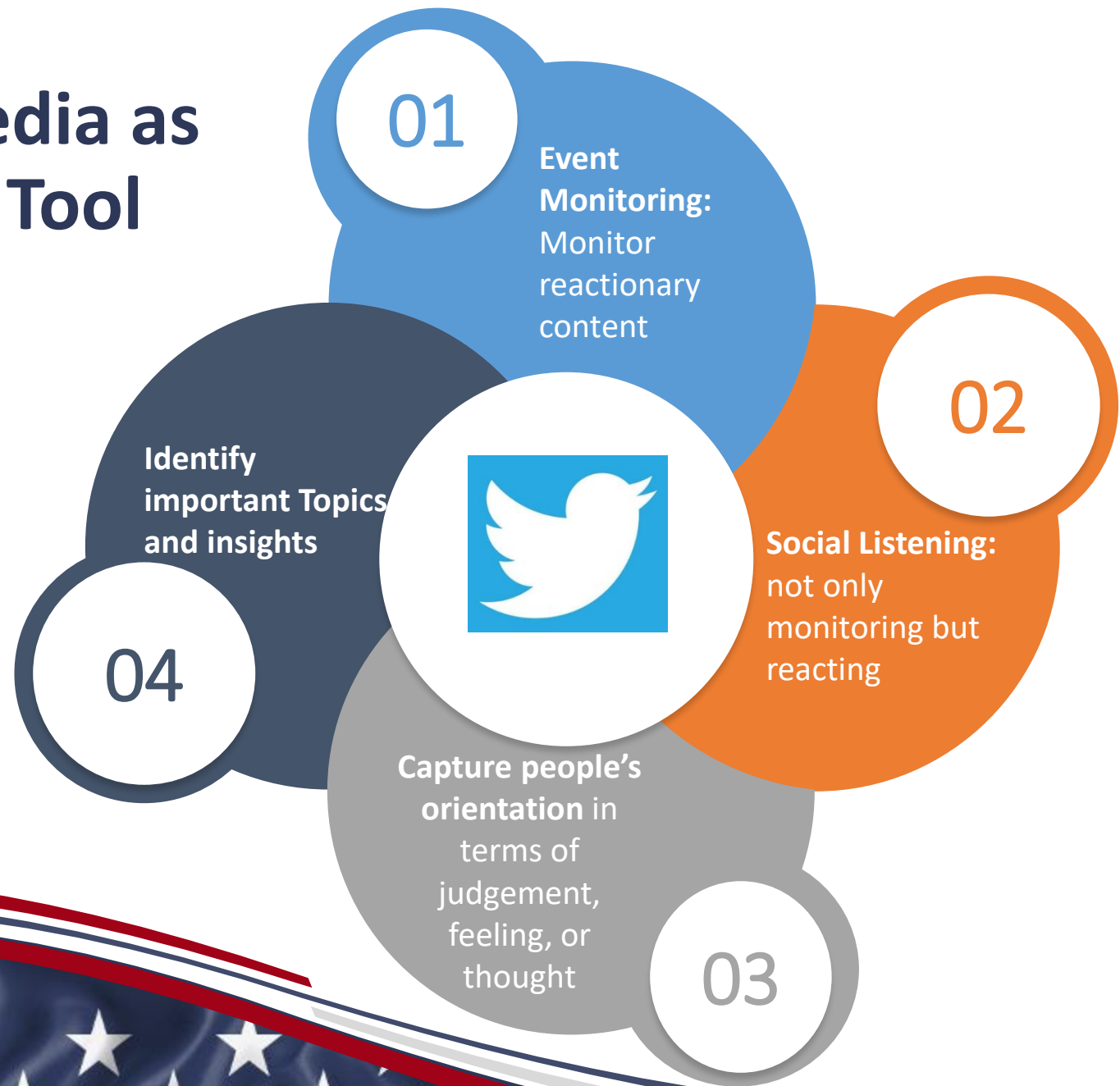
II. Social Media as a Political Tool

- Twitter has **321 million** monthly active users globally
- Largest source of breaking news on US elections day: **40 million tweets**
- Important political tool : **Deliver message, Gather Information**
- More followers = **More Retweets**
- Hashtags, URL's and @mentions =>**Viral**



II. Social Media as a Political Tool

Event Tweets Live Stream



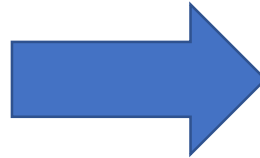
III. Real-Time Insights Use Cases (1 of 3)



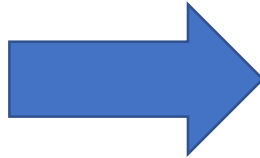
Fundraising
Tours



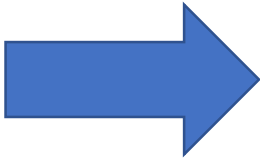
Interviews
& Speeches



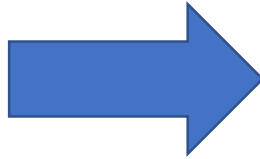
Capture a moment and build on it **INSTANTANEOUSLY**



Deliver the **KEY** words



Identify **STRONG** and **WEAK** points



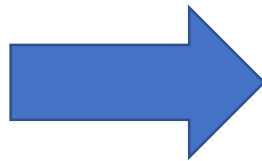
Discuss the **RELEVANT** topics

III. Real-Time Insights Use Cases (2 of 3)

Recalibrate talking points with these insights:



Debates



- Who is talking about the debate? How many?
- What are they talking about? What is the mood?
- What is the location of these conversations?
- Who is gaining popularity?
- Where is the information coming from?
- Any sabotage occurring?

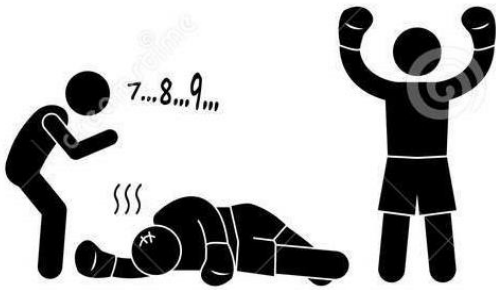
What could go wrong?



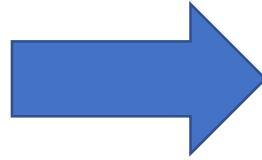
Newt Gingrich

- 2012 Republican Primary debate
- Asked about his ex-wife at the start of the debate
- Within minutes, his negative sentiment increase rapidly – **it became 3x more negative in 2 minutes.**

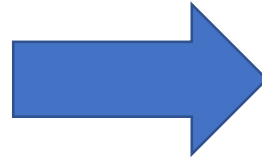
III. Real-Time Insights Use Cases (3 of 3)



Attacks from
other
Candidates



Immediate Response



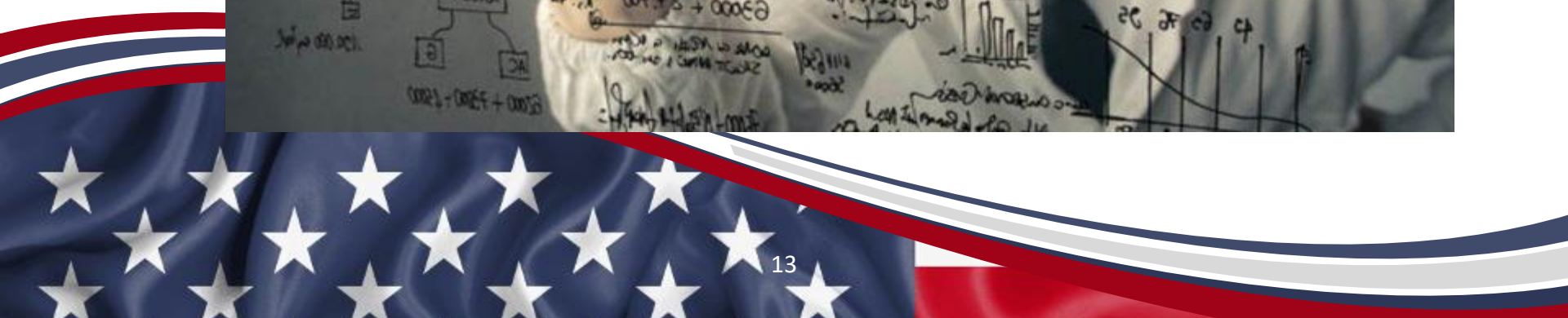
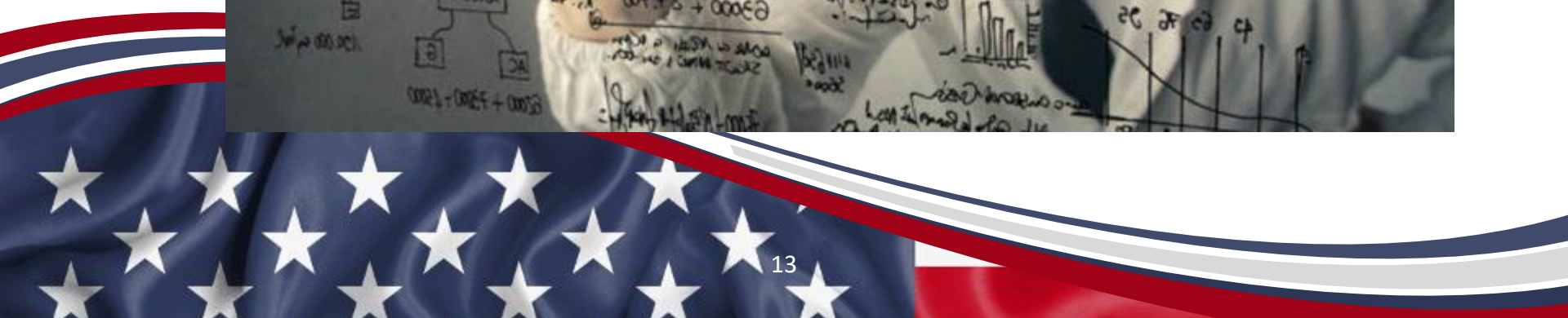
Avoid catastrophes



Grand Old Party Debate: 2016

	9:00 PM ET	9:08 PM ET	9:16 PM ET	9:24 PM ET	9:32 PM ET	9:40 PM ET	9:48 PM ET	9:56 PM ET	10:04 PM ET	10:12 PM ET	10:20 PM ET	10:28 PM ET	10:36 PM ET	10:44 PM ET	10:52 PM ET	11:00 PM ET	11:08 PM ET	11:16 PM ET	11:24 PM ET
1	• 1 Ben Carson																		
2	• 2 Donald Trump																		
3	• 3 Marco Rubio																		
4	• 4 John Kasich																		
5	• 5 Ted Cruz																		
6	• 6 Carly Fiorina																		
7	• 7 Jeb Bush																		
8	• 8 Rand Paul																		

13



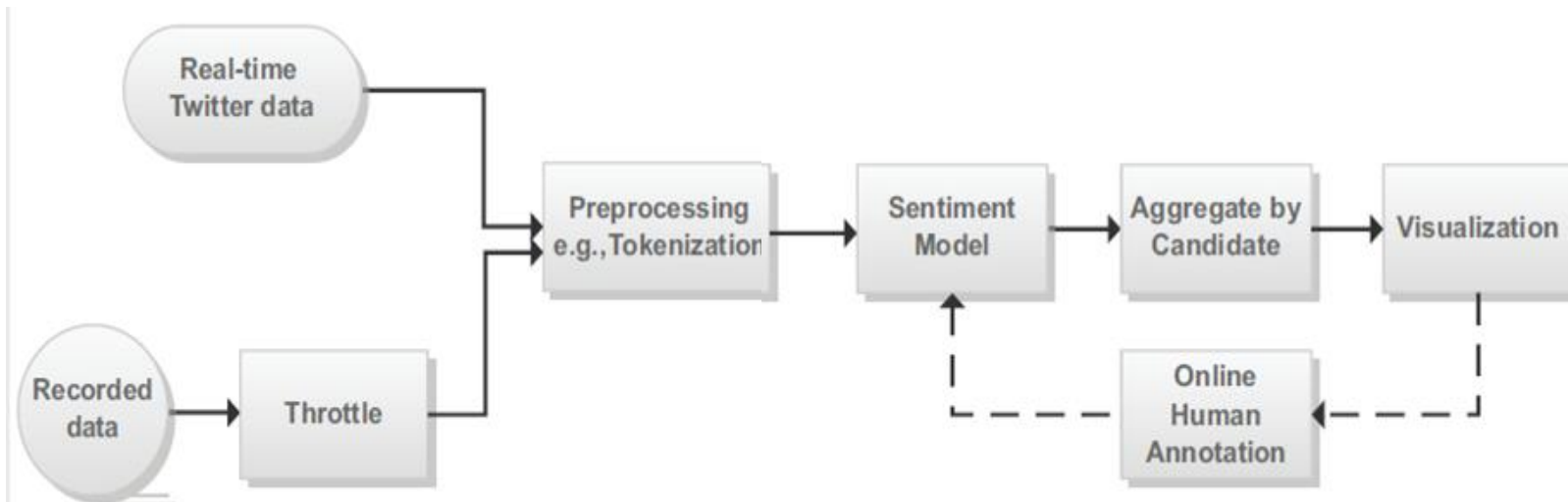


IV. TOOLS CAPABILITIES

OUR STREAM

IV. Tools Capabilities

Sentiment Analysis – Word Count and Hashtag Count



```
Terminal Shell Edit View Window Help
Streaming_Tweets_Democrats_2020 — twitter_app_biden.py — 102x54

uite a bit:

High Candidate Awareness:

Warren...
-----
Tweet Text: RT @choffmann10: The @washingtonpost reports that Biden has had "an explosion of wealth" s
ince leaving the White House.

On the left is th...
-----
Tweet Text: RT @jonfavs: Among voters who've heard a lot about the candidates, the horserace changes q
uite a bit:

High Candidate Awareness:

Warren...
-----
Tweet Text: RT @charliekirk11: Did you know:

Joe Biden was once the poorest member of the Senate

Now, he's worth millions!

He rents a home at $20,00...
-----
Tweet Text: RT @AndrewPollackFL: Statements from 2020 Democrats:

Biden: . . .
Sanders: . . .
Harris: . . .
Warren: . . .
Buttigieg: . . .
O'Rourke: . . .
Booker: ...
-----
Tweet Text: @jotofuerte Haha get outta here!!

-----
Tweet Text: @Can2geterdone @ECHOtheCALL @POTUS The Dems are propping up RBG until they can claim the '
Biden Rule', like the GOP did for Merrick Garland.

-----
Tweet Text: Why would I let any current pseudo celeb into my club ? WHY? 🇺🇸 Stay in Manhattan with
your kiddie crowds and IG.. https://t.co/stMMCjnC0c

-----
Tweet Text: @KateAronoff The healthiest thing one can do is abandon the abusive relationship America ha
s with the Democratic Par.. https://t.co/hbPZSwIbBN

-----
Tweet Text: RT @BenKTallmadge: @ThunderB @Cara_TXZEAL @Avery1776 @CarrollQuigley1 @MadAddictSport @alm
ostjingo @realKyleOlbert @BasedBasterd @BabeRefle...

-----
Tweet Text: Photo credit freddygmmedia medianetads @musicbygigi @musicbygigi worldyacht #djviolinist #e
vententertainment #dj.. https://t.co/mj7YU2qyUF

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Streaming_Tweets_Democrats_2020 — python - java - cp ~/miniconda3/lib/python3.7/site-packages/pys...

t (executor driver) (2/4)
19/06/25 18:32:48 INFO TaskSetManager: Finished task 1.0 in stage 46.0 (TID 838) in 89 ms on localhos
t (executor driver) (3/4)
19/06/25 18:32:48 INFO PythonUDFRunner: Times: total = 76, boot = -2823, init = 2892, finish = 7
19/06/25 18:32:48 INFO Executor: Finished task 0.0 in stage 46.0 (TID 837). 2844 bytes result sent to
driver
19/06/25 18:32:48 INFO TaskSetManager: Finished task 0.0 in stage 46.0 (TID 837) in 95 ms on localhos
t (executor driver) (4/4)
19/06/25 18:32:48 INFO TaskSchedulerImpl: Removed TaskSet 46.0, whose tasks have all completed, from
pool
19/06/25 18:32:48 INFO DAGScheduler: ResultStage 46 (start at NativeMethodAccessorImpl.java:0) finish
ed in 0.107 s
19/06/25 18:32:48 INFO DAGScheduler: Job 26 finished: start at NativeMethodAccessorImpl.java:0, took
0.110175 s
19/06/25 18:32:48 INFO CheckpointFileManager: Writing atomically to file:/private/var/folders/6x/60z0
gqlj4pv7rxwdsjzntbvr0000gn/T/temporary-6e417d34-9a9c-4f68-bc41-988685dc76ec/commits/6 using temp file
file:/private/var/folders/6x/60z0gqlj4pv7rxwdsjzntbvr0000gn/T/temporary-6e417d34-9a9c-4f68-bc41-9886
85dc76ec/commits/.6.6609900d-e3fe-43e2-b180-59525781d1f5.tmp
19/06/25 18:32:48 INFO CheckpointFileManager: Renamed temp file file:/private/var/folders/6x/60z0gqlj
4pv7rxwdsjzntbvr0000gn/T/temporary-6e417d34-9a9c-4f68-bc41-988685dc76ec/commits/.6.6609900d-e3fe-43e2
-b180-59525781d1f5.tmp to file:/private/var/folders/6x/60z0gqlj4pv7rxwdsjzntbvr0000gn/T/temporary-6e4
17d34-9a9c-4f68-bc41-988685dc76ec/commits/6
19/06/25 18:32:48 INFO MicroBatchExecution: Streaming query made progress: {
  "id" : "cc689a74-a9bb-4ab3-9b7f-a762c320456f",
  "runId" : "b190e95a-b89d-4647-8ea4-e01d3d3b82ec",
  "name" : "Tweets",
  "timestamp" : "2019-06-25T16:32:48.005Z",
  "batchId" : 6,
  "numInputRows" : 25,
  "inputRowsPerSecond" : 8.327781479013991,
  "processedRowsPerSecond" : 77.39938080495355,
  "durationMs" : {
    "addBatch" : 204,
    "getBatch" : 0,
    "getEndOffset" : 0,
    "queryPlanning" : 18,
    "setOffsetRange" : 0,
    "triggerExecution" : 323,
    "walCommit" : 37
  },
  "stateOperators" : [ ],
  "sources" : [ {
    "description" : "TextSocketV2[host: localhost, port: 1236]",
    "startOffset" : 134,
    "endOffset" : 159,
    "numInputRows" : 25,
    "inputRowsPerSecond" : 8.327781479013991,
    "processedRowsPerSecond" : 77.39938080495355
  } ],
  "sink" : {
    "description" : "MemorySink"
  }
}
```

IV. Tools Capabilities

Constraints of Twitter Analysis



Political Tweets tend to be sarcastic presenting challenges for computer models



Twitter's Public API only represents 1% or less of its entire traffic which is likely insufficient for accurate analysis of public sentiment

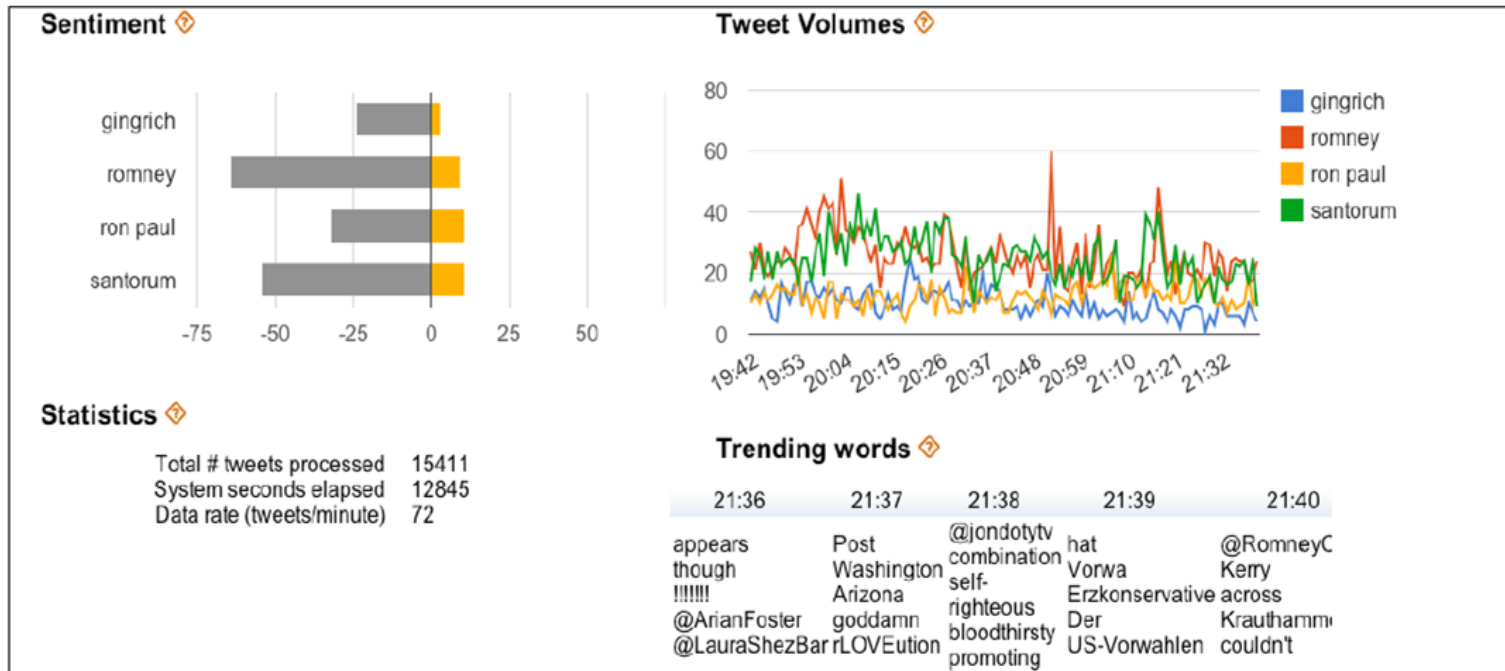


Replies to political messages not be captured by keyword



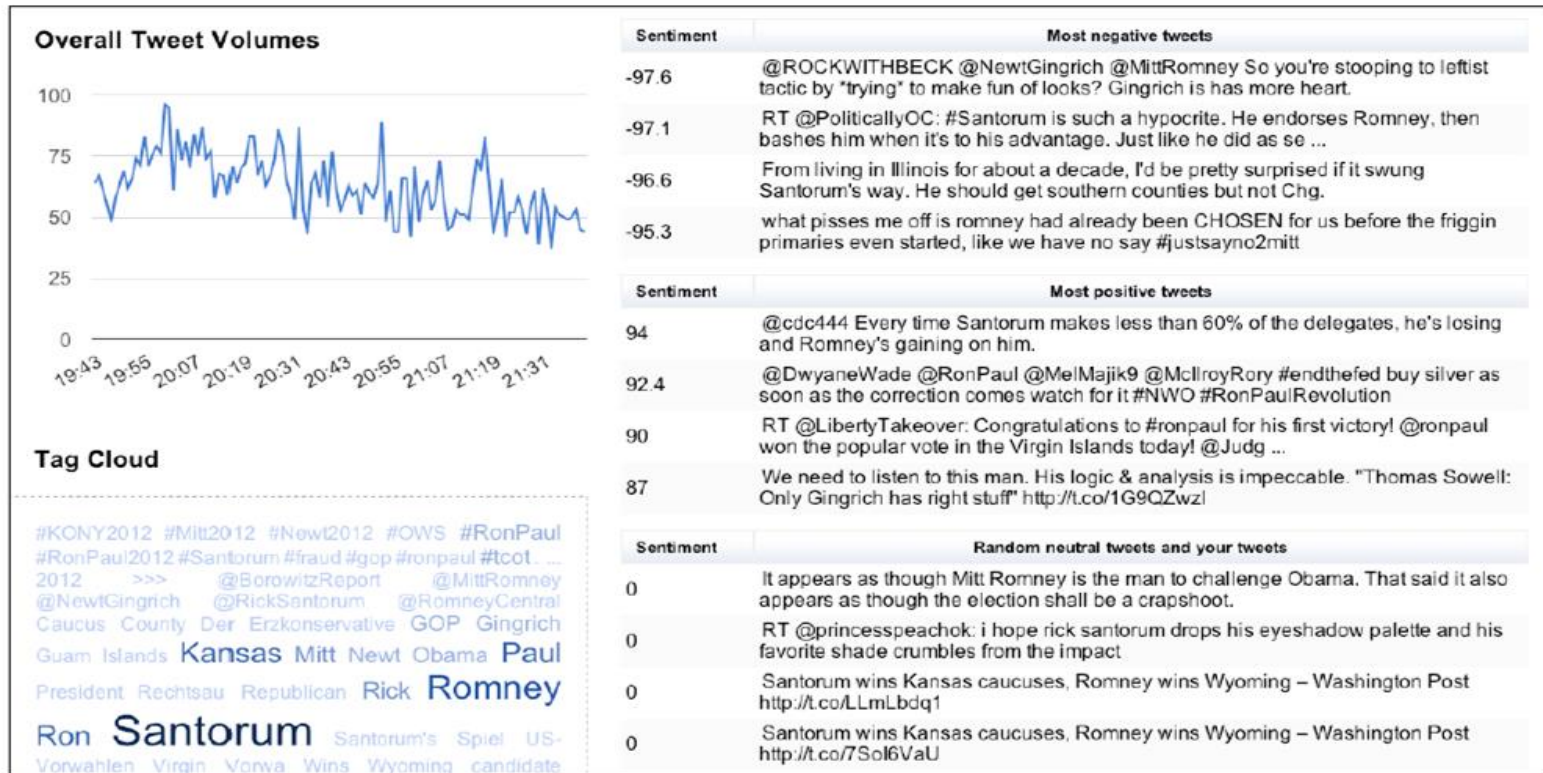
IV. Tools Capabilities

Next Steps: Dashboard of 2012 Debate (1 of 2)



IV. Tools Capabilities

Next Steps: Dashboard of 2012 Debate (2 of 2)





OUR CURRENT DASHBOARD

V. Questions

Thank you.

