

Black Lives Matter

Social Media Analytics

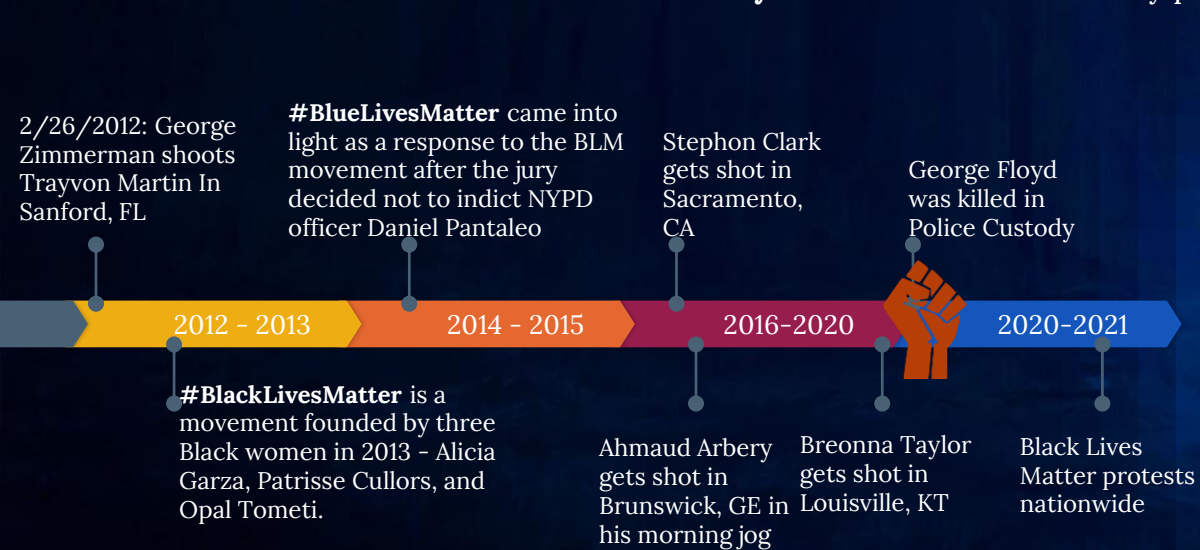
Ali Al Samuraee
Mesaye Bahiru
Cristina Esposito
Alya Gabsi
Gayatri Krishnamoorthy



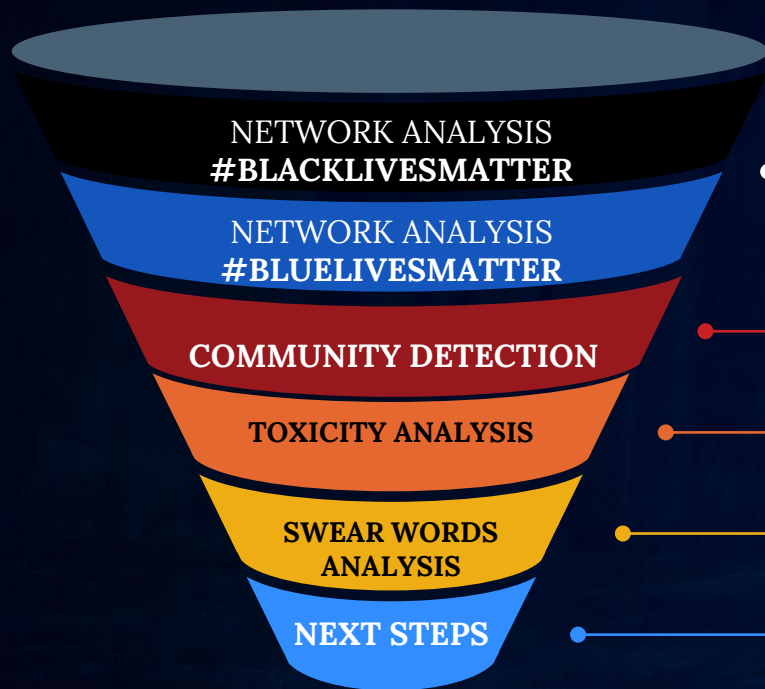
Racism in America

The United States of America encounters a disproportionate criminal justice system, where from arrest through sentence to death row, Black and Latino males are heavily represented.

According to a new study conducted by Frank Edwards, of Rutgers University's School of Criminal Justice, African Americans **are 2.5 times more likely than whites** to be slain by police.



Project Overview



30,000 Tweets (5k per period and hashtag) in 2020

Pre: 16th to 23rd of May
During: 7th of June
After: 21st of June

Pre: 2nd to 23rd of May
During: 6th and 7th of June
After: 18th to 21st of June



Community detection analysis during blue
lives matter movement

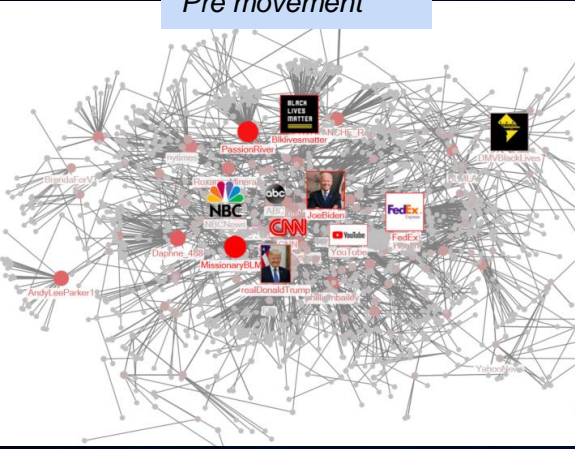
Perspective API that uses machine learning to
identify "toxic" comments

Using statistical inference & frequency table

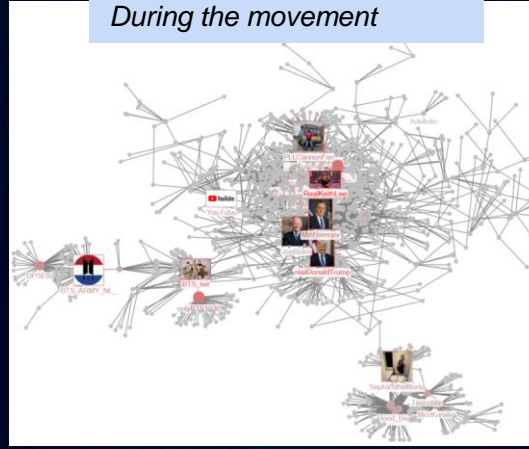
Enhancement to the project

Network Analysis – Black lives matter

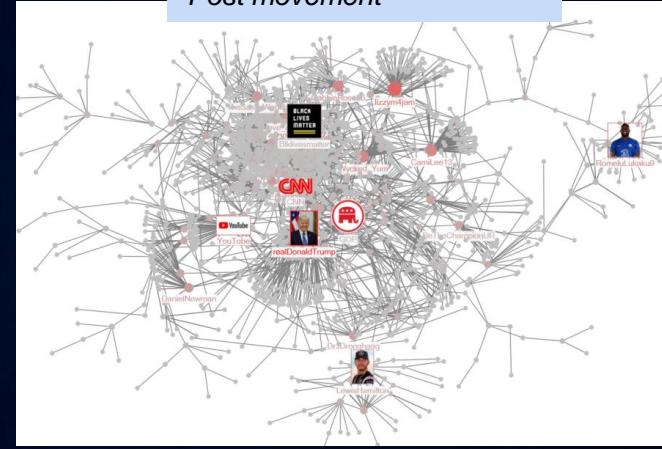
Pre movement



During the movement



Post movement



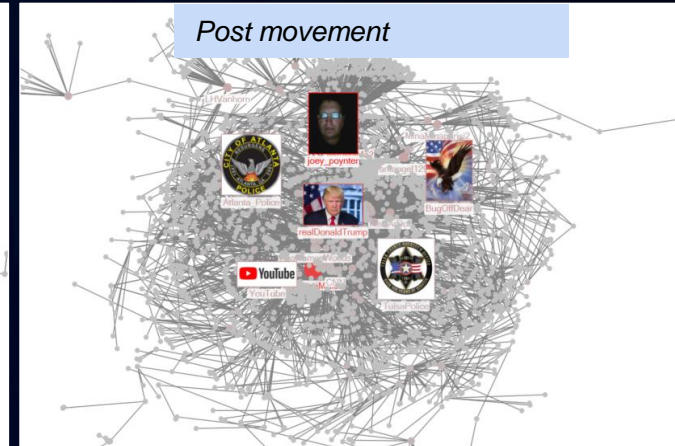
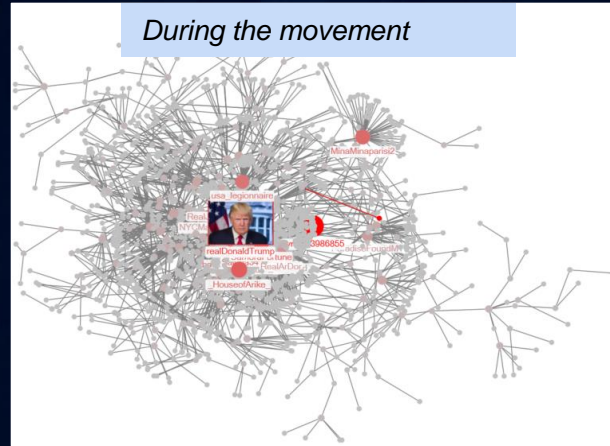
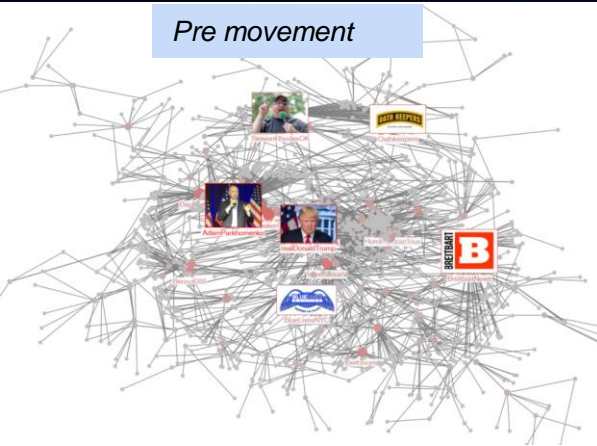
Network Evolution from prior to post movement



	Pre	During	Post
Highest Degree	MissionaryBLMM	RealKeithLee	realDonaldTrump
Highest Betweenness	JoeBiden	realDonaldTrump	realDonaldTrump
Highest Pagerank	MissionaryBLMM	RealKeithLee	realDonaldTrump

- Controversial tweets and retweets
- Pro law enforcement
- Threatened to bring in military to stop protests

Network Analysis – Blue lives matter

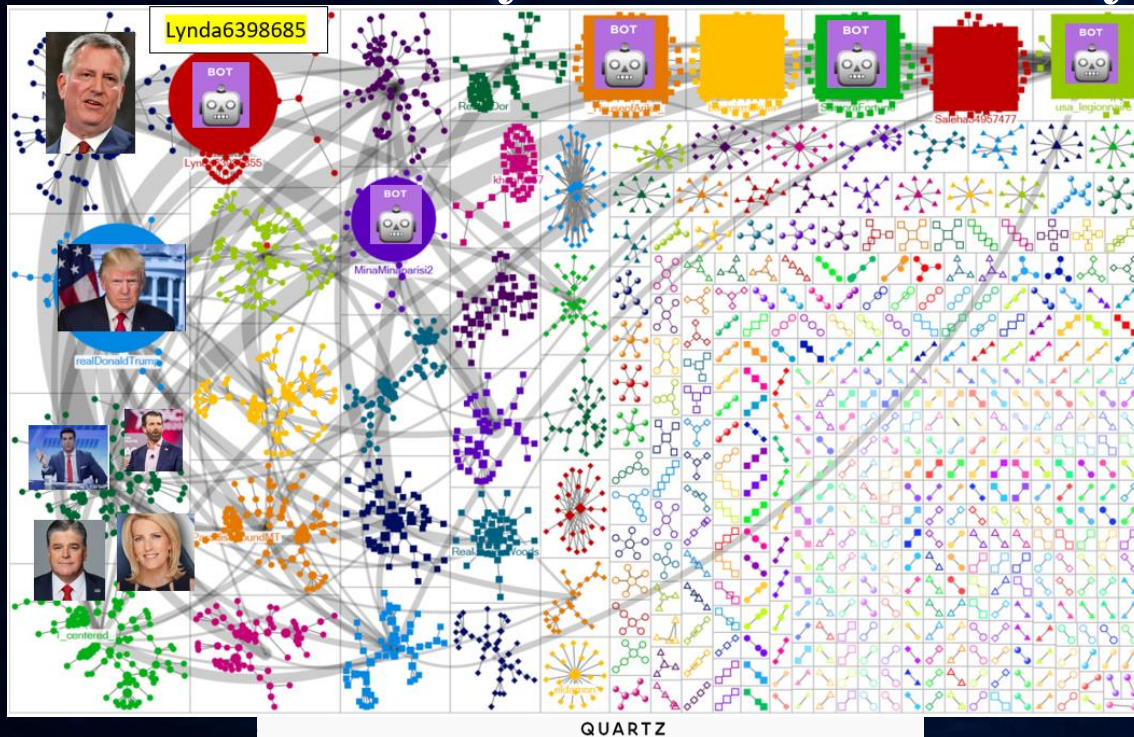


Network Evolution from prior to post movement

	Pre	During	Post
Highest Degree	AdamParkhomenko	Lynda63986855	joey_poynter
Highest Betweenness	realDonaldTrump	realDonaldTrump	realDonaldTrump
Highest Pagerank	AdamParkhomenko	Lynda63986855	joey_poynter

- Who is Lynda63986855 ?

Community Detection Analysis – Blue lives



- Applied Girvan-Newman algorithm
- To isolate clusters within the networks
- Identify patterns, characteristics, and stance in the network linked to suspected fake accounts

BOTS, SPAM, PROPAGANDA, OH MY

More than 60% of Donald Trump's Twitter followers look suspiciously fake

BotSentinel.com

85%

Rating: **Problematic**

This report was created for @Lynda63986855
Report created: 4-11-2022 11:56:08



■ Normal: 0% - 24%
■ Satisfactory: 25% - 49%
■ Disruptive: 50% - 74%
■ Problematic: 75% - 100%

Our analysis has concluded Lynda63986855 exhibits problematic tweet activity and we strongly recommend you avoid interacting with this account and report it to Twitter.

Save Report

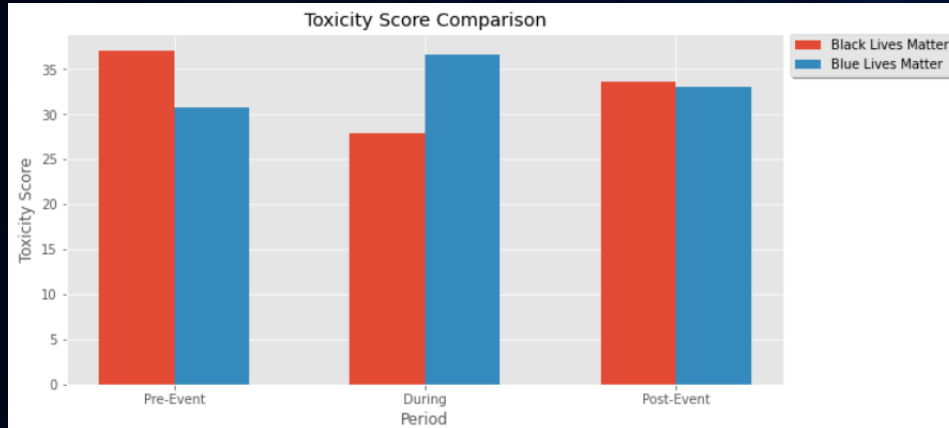
View Profile

Finished

Toxicity Analysis

Goal: Which movement has the most hate speech on Twitter?

Objective: Calculating average toxicity score per period



	#BlackLivesMatter			#BlueLivesMatter		
Period	Pre-Event	During	Post-Event	Pre-Event	During	Post-Event
Score	37.07	27.96	33.63	30.82	36.63	33.12
Growth		-25%	20%		19%	-10%

Conclusion & Thoughts:

Pre-Event: BLM had a more violent speech as supporters were condemning crimes against black folks.

During Period: BLM tone changed as they were seeking solidarity considering the peak moment of the issue. In response, Blue LM toxicity increased by 19% to push back against the growing amplitude of the movement.

Post-Event: BLM's toxicity increased by 20% as a response to the violence exerted by blue live matters supporters.

Swear Word Analysis

Goal: Which movement uses swear words the most? What are the most common swear words for each movement?

Objective: Using statistical inference & frequency table

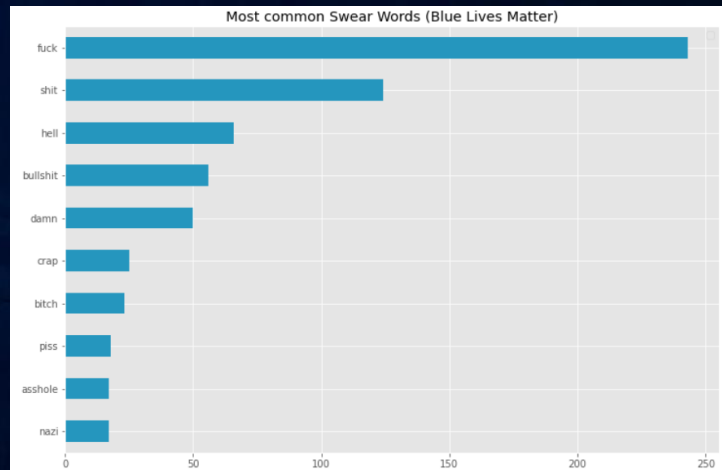
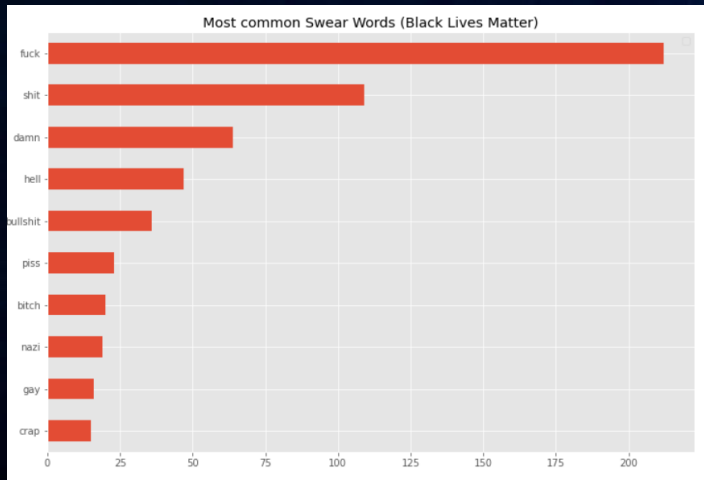
1

statistics: 4.147778231788255
pvalue: 1.678586775843119e-05



The result is statically significant.
Blue LM swear more than BLM at a 5% level

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Next Steps & Enhancement

- ✦ Get a larger dataset with several days (continuous days)
- ✦ Alter periods to validate variation
- ✦ Compare network analysis with other movements such as Capitol Invasion

