UMD Information Challenge 2022

Team Number:
IC22011
Dataset:
The Armed Conflict and Event Project

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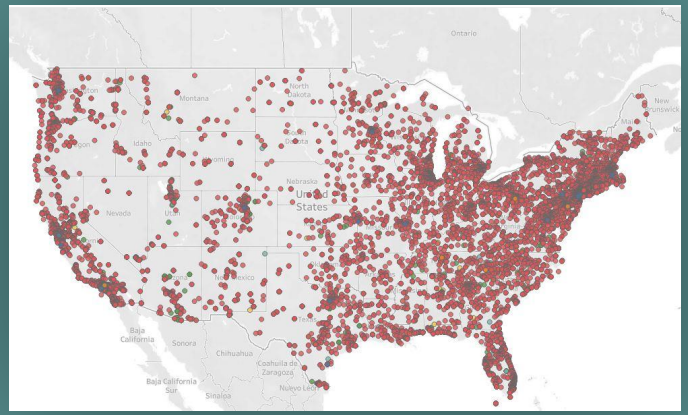


Presentation Agenda

- The Problem
- The Data
- Analysis
- Conclusions
- Recommendations
- Future Work

The Problem

1. How has the number of events changed over the period from 01/01/2020 to 01/21/2022?
2. Are there any significant specific locations/metro areas that have changed more than others?
3. How have the types of events changed over the period?
4. Are certain types of events more prominent in specific areas?

The Data

Event Type/Subtype Breakdown

Event Type	Sub Event Type	Event Date 2020	2021	2022	Grand Total
Battles	Armed clash	10	4	1	15
Explosions/Remote violence	Grenade		1		1
	Remote explosive/landmine/IED	1	3		4
	Suicide bomb	1			1
Protests	Excessive force against protesters	116	27		143
	Peaceful protest	20,645	12,678	536	33,859
	Protest with intervention	783	247	12	1,042
Riots	Mob violence	48	33	1	82
	Violent demonstration	777	168		945
Strategic developments	Arrests	28	29	5	62
	Change to group/activity	298	139	2	439
	Disrupted weapons use	1	9		10
	Looting/property destruction	24	14		38
	Other	455	483	11	949
Violence against civilians	Attack	103	65	5	173
	Sexual violence	5	4		9
Grand Total		23,295	13,904	573	37,772

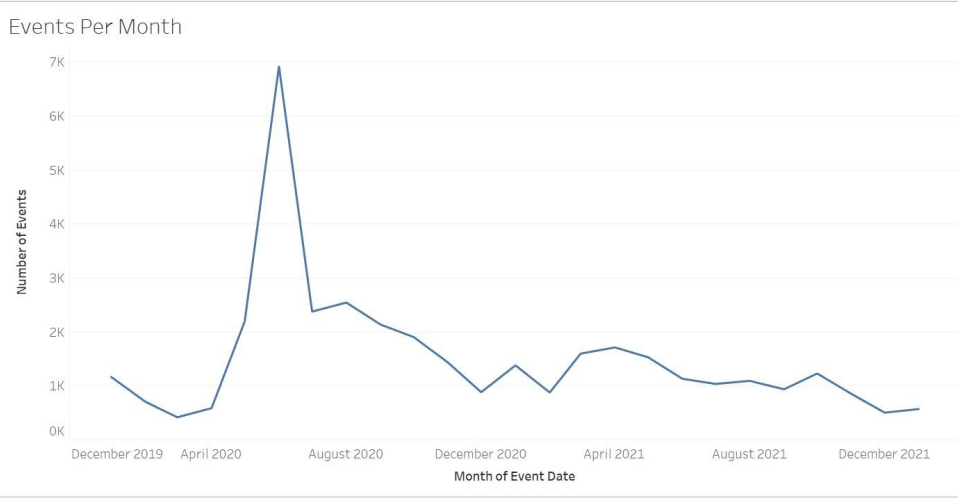
- Period Covered:
  - 01 JAN 2020 - 21 JAN 2022
- 37,772 incidents related to protests and political/targeted violence
  - 89.6% peaceful protests
  - 2.8% protests w/ intervention
  - 2.7% riots
  - <1% each remaining category
- We included state population data from the census bureau to normalize the incident counts

Data Concerns

- Categorization of events is subjective to an extent
  - peaceful protest -> violent demonstration -> mob violence
- Data is given in absolute terms i.e. not adjusted for population
- To what extent can trends be attributed to specific world events
  - Are spikes coincidences or reactions?

Sub Event Type
Armed clash
Grenade
Remote explosive/landmine/IED
Suicide bomb
Excessive force against protesters
Peaceful protest
Protest with intervention
Mob violence
Violent demonstration
Arrests
Change to group/activity
Disrupted weapons use
Looting/property destruction
Other
Attack
Sexual violence

Total Events Over Time

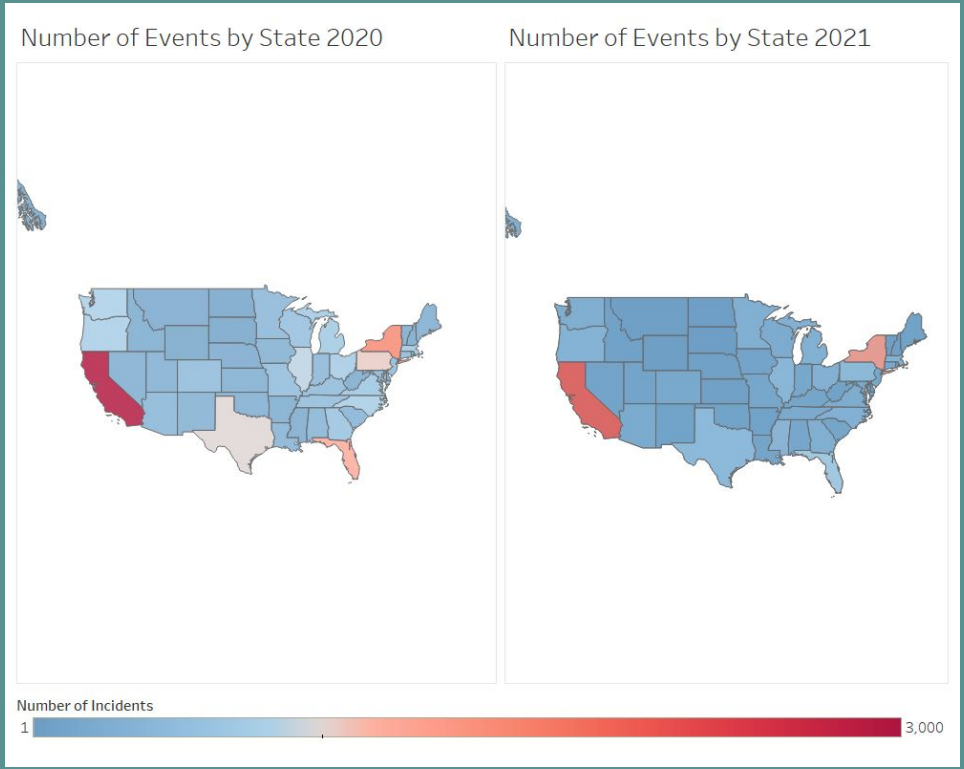


Noticeable Spikes

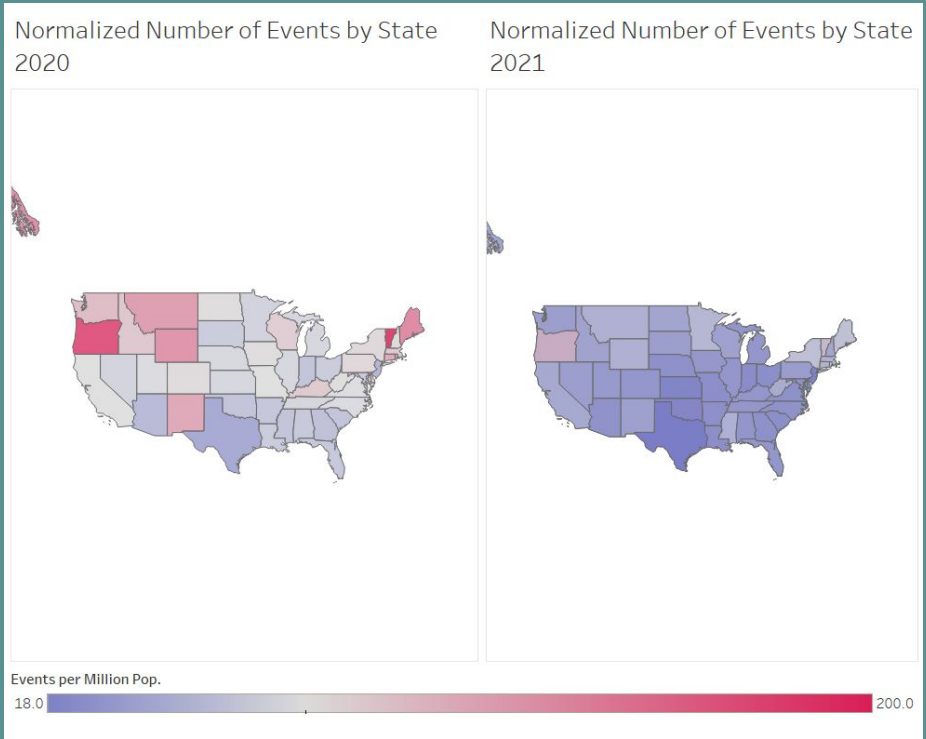
- June 2020
  - Appears to correlate with the death of George Floyd
- January 2021
  - Appears to correlate with the counting of electoral votes on 06 JAN
- April 2021
  - Appears to correlate with the death of Daunte Wright
- October 2021
  - Appears to correlate with Texas abortion law passage

Changes Over Time by Location

High Population states have the most incidents...

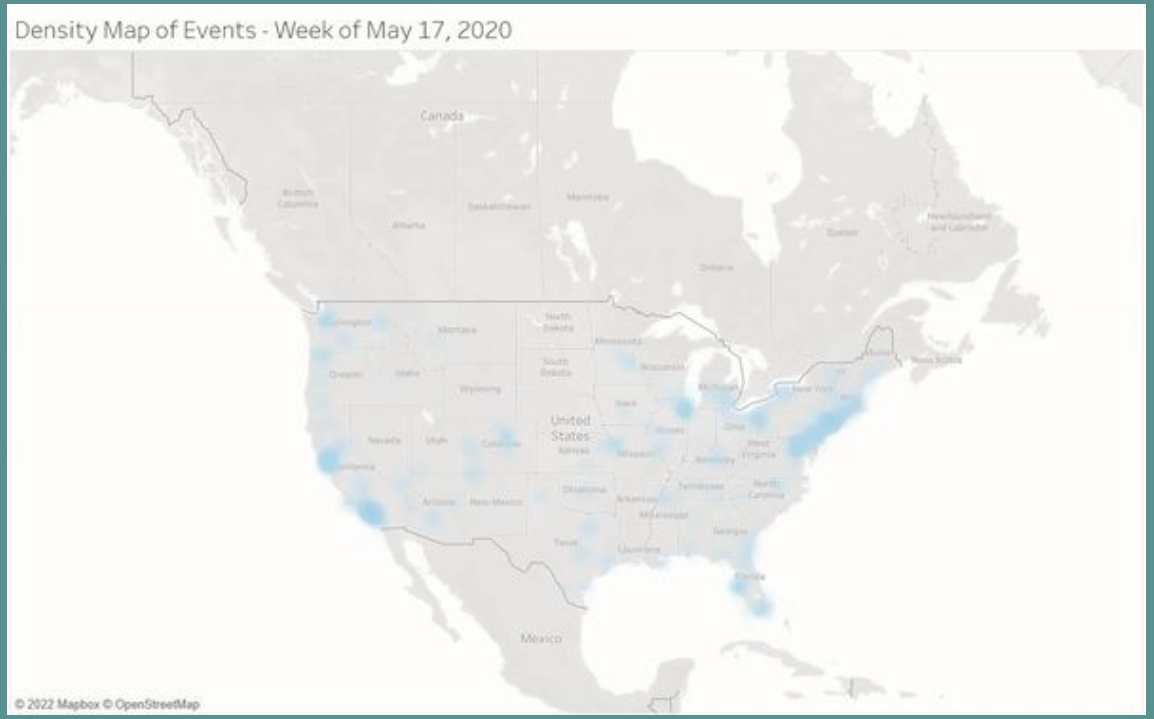


Adjusting for Population



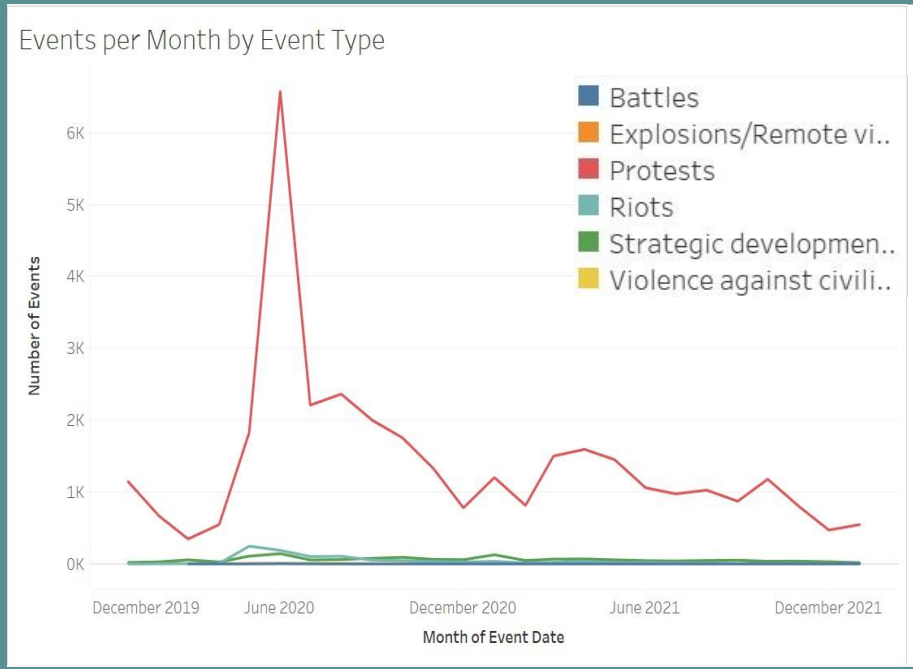
- After adjusting for population, differences by region become clear
- Large decrease in number of events from 2020 to 2021.
  - Mainly due to June 2020 spike
- Decrease was roughly equal across all states
  - Above average states remain above average

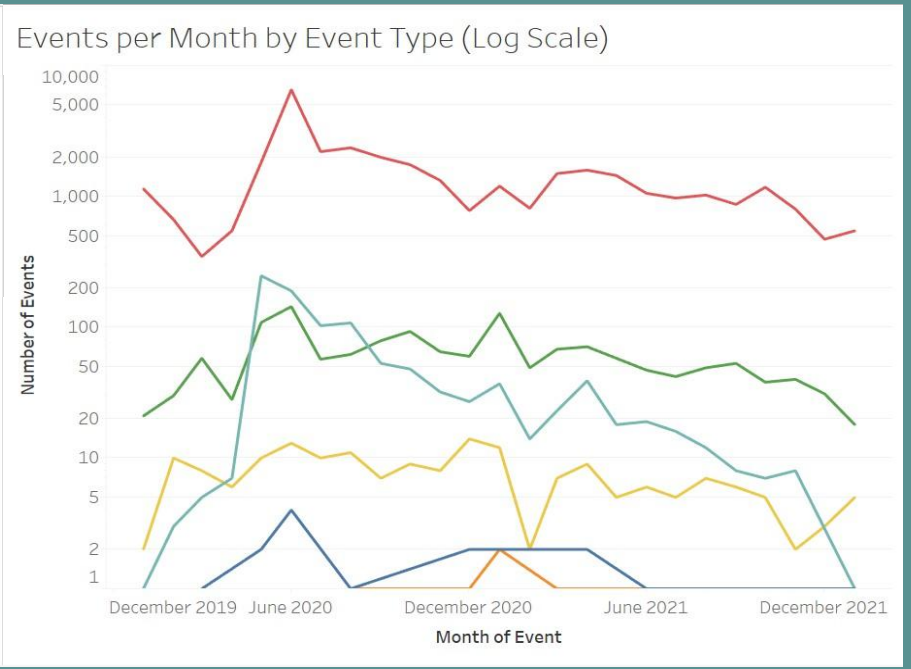
Regional Changes



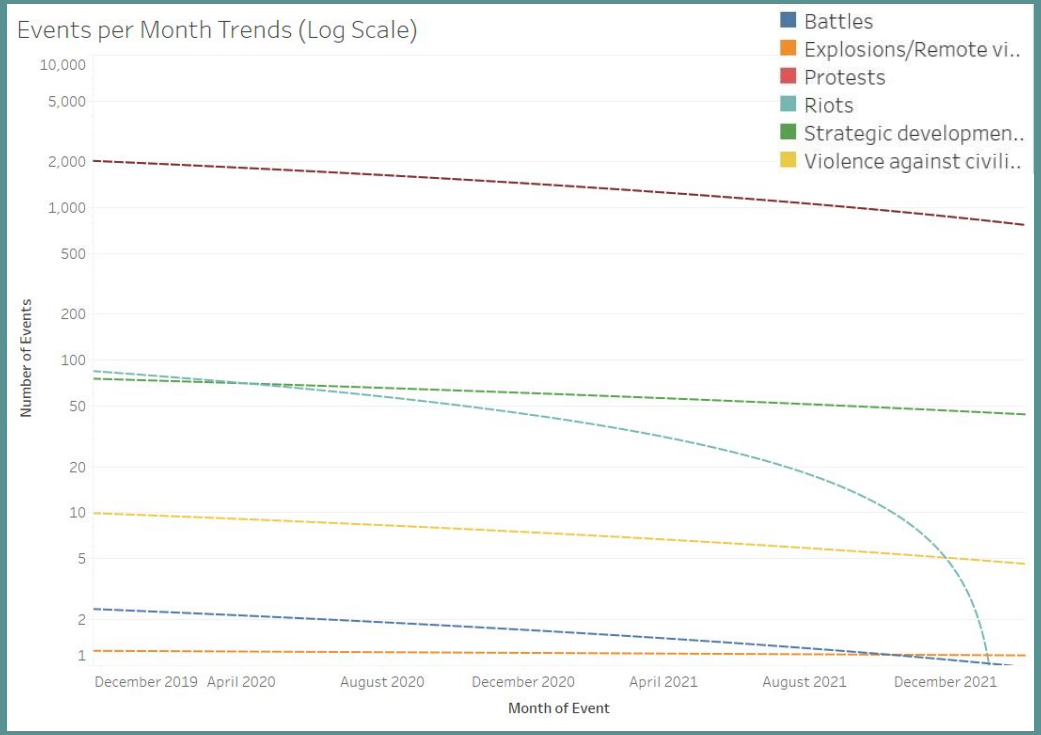
- Spikes in events were evenly distributed across the United States population centers
  - Largest spikes seen in major metro areas
- Very few protest movements were constrained to a particular area

Types of Events Over Time



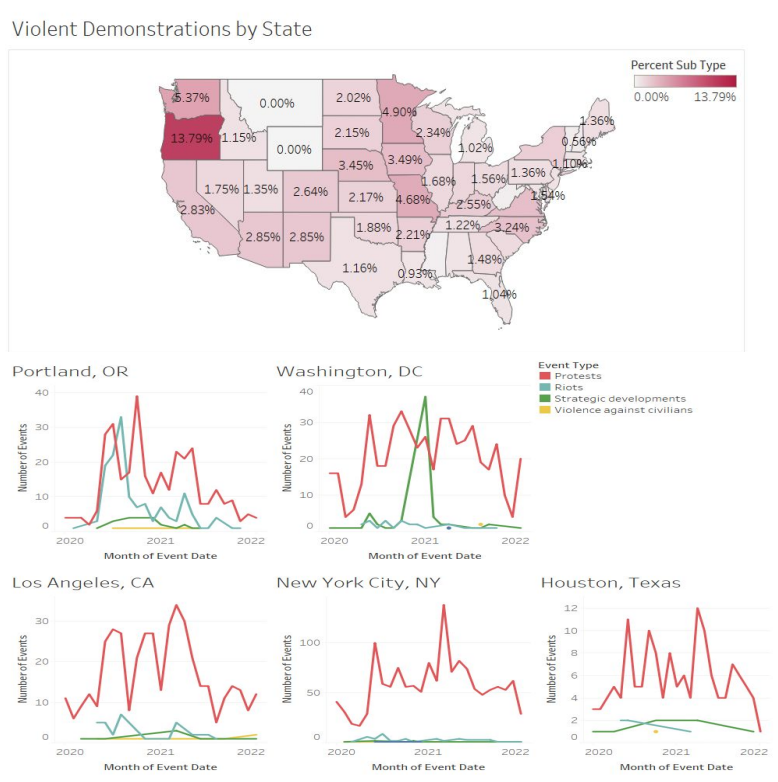


Event Trends



- Riots increased the most proportionally during the June 2020 spike
- Riots also decreased the fastest of any event type
- All other events drop proportionally from peak in June 2020

Notable Locations



- Particularly high proportion of violent events in Oregon
- Portland metro area had the highest proportion of violent events among studied locations
- DC had a large spike in strategic developments in JAN 2021
  - Arrests and National Guard Deployments
- NYC, like much of the northeast, had many protests but little violence

Conclusions: Revisiting the Problem

- Change in total events over time
  - Spikes in data correlated with known nationwide events
- Regional changes over time
  - Spikes in different regions were heavily correlated
  - A change in total events in one state was unlikely to be an isolated response
- Types of events over time
  - During periods of unrest, violent events rise at the fastest rate; however, they also fall at the fastest rate as time goes on.
- Events types by region
  - Large number of events and violence in Pacific Northwest
  - Large number of events but low violence in Northeast
  - Low number of events and low violence in the South

Recommendations

This data can be used to determine locations that are most likely to undergo violent events in response to nationwide unrest.

Future violence can be mitigated or prevented by focusing law enforcement on areas of concern determined by our findings.

Future Work

Although our conclusions were revealing, the limited time frame of the competition leaves us with several avenues for continued research.

For one, we could use our results to specify cities within states that we noticed as particularly violent, potentially providing more accurate conclusions.

Another potential opportunity could be looking more into the ripple effects caused by controversial events, as several we examined had lasting impacts on the number of protests and other types of events measured.

Resources

- Graphics generated using Tableau Desktop

- Population Data:
  - Bureau, U. S. C. (2021, October 8). *2020 census apportionment counts press kit*. Census.gov. Retrieved March 5, 2022, from https://www.census.gov/newsroom/press-kits/2021/2020-census-apportionment-counts.html

Questions?

Additional Slides