

Team Party Animals presents: A MASSY SITUATION: Mobility Data Analysis

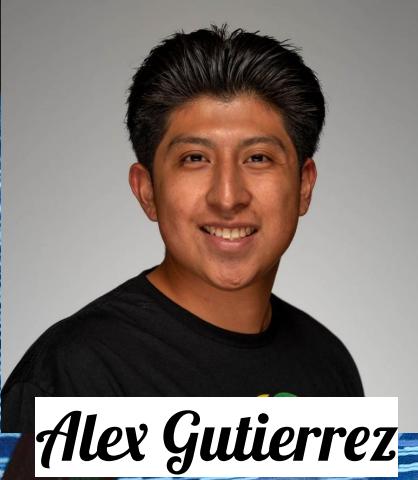
Mentor: Kelly Gaither

Co-Mentor: Gladys Chen

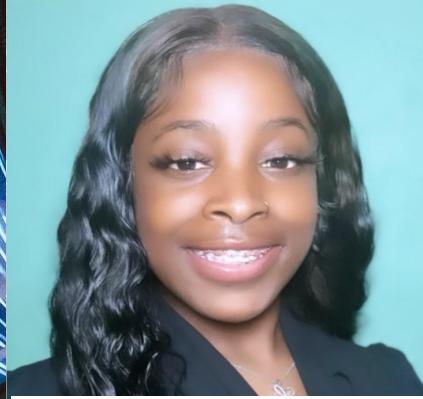
**Hackers: Leah Monet Morgan, Yamonta Gaines, Michael
Olubode, Lisa Phan, Alex Gutierrez**

Theme_song: WE ARE ONE





Alex Gutierrez



Leah Monet Morgan



Lisa Phan



Michael Olubode



Gladys Chen Kelly Gaither



Yamonta Gaines



REGGIE BALLESTEROS
photography

Background

- Mass gatherings are defined as large number of people > 1000 congregating at a specific location for a specific purpose (*CDC Yellow Book 2024*)
- Attendees at mass gatherings face unique risks due to environmental hazards, challenging security situations, increased risk for infectious disease transmission
- This team identifies mass gatherings that occurred from 2018 through 2022 using anonymized Safegraph Mobility data, looking at travel patterns and demographics estimated from census Data and compare this to past events

Approaches (Tools, Methods)

Datasets used:

- Safegraph
- Census

Programming Languages:

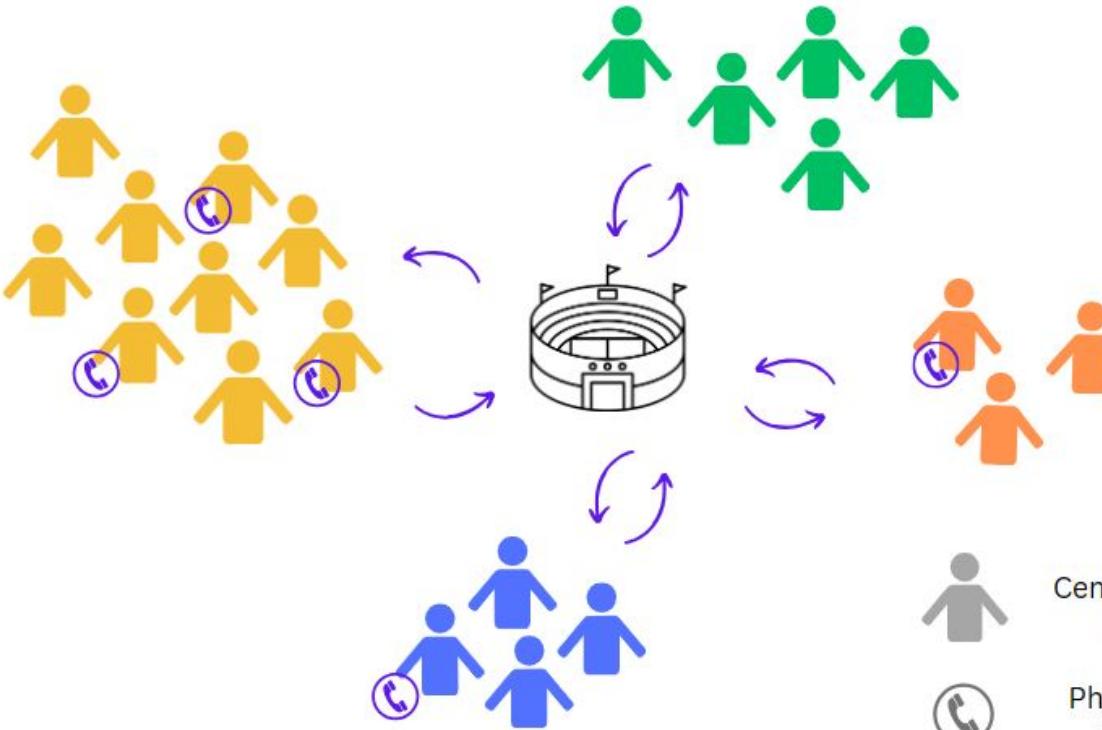
- R & Python

Platforms:

- RStudio on Lonestar 6 and Frontera TACC Supercomputers
- LookerStudio for Dashboard



Estimating Mass Gatherings



Census block
group

Phone data
sample



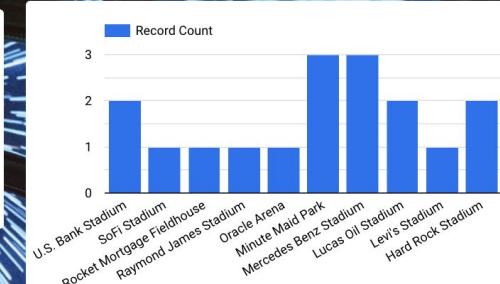
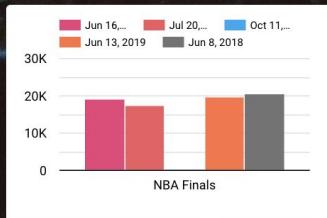
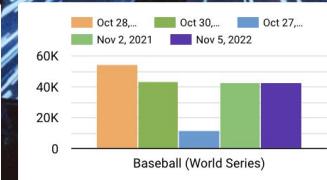
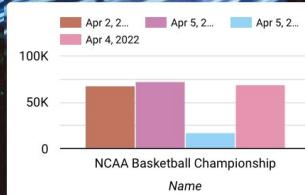
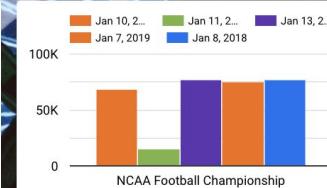
Dashboard

PARTY ANIMALS PRESENTS:

A Mass Situation

Mentors: Kelly Gaither & Gladys Chen

Hackers: Yamonta Gaines, Leah Monet, & Lisa Phan



Date	Name	Location	Estimated_Count_Search	Estimated_Visitors
04-02-2018	NCAA Basketball Championship	Alamodome Stadium	67,831	NA
10-11-2020	NBA Finals	AdventHealth Arena	6	NA
04-04-2022	NCAA Basketball Championship	Cessna Superdome Stadium	69,423	NA
10-08-2018	NBA Finals	State Farm Center	55,556	1025,140222
10-25-2018	Baseball (World Series)	Dodger Stadium	54,967	10734,4756
07-20-2021	NBA Finals	Fiserv Forum	17,297	9438,833583
10-27-2020	Baseball (World Series)	Globe Life Field	11,437	11978,67555
02-02-2020	Superbowl	Hard Rock Stadium	62,417	80147,71581
01-11-2021	NCAA Football Championship	Hard Rock Stadium	14,926	18194,71968
01-07-2021	NCAA Football Championship	Levi's Stadium	74,814	41056,19491
04-05-2020	NCAA Basketball Championship	Lucas Oil Stadium	17,500	8075,486826
01-10-2022	NCAA Football Championship	Lucas Oil Stadium	68,311	4517,44856
01-08-2018	NCAA Football Championship	Mercedes-Benz Stadium	77,430	83440,18497
02-03-2019	Superbowl	Mercedes-Benz Stadium	70,081	85633,58292
01-13-2021	NCAA Football Championship	Mercedes-Benz Stadium	76,885	10436,06798
10-30-2019	Baseball (World Series)	Minute Maid Park	43,326	75152,19282
11-02-2021	Baseball (World Series)	Minute Maid Park	42,868	46845,31077
11-05-2020	Baseball (World Series)	Minute Maid Park	42,958	23084,31619
06-13-2019	NBA Finals	Oracle Arena	19,598	26826,90473
02-07-2020	Superbowl	Raymond James Stadium	25,000	34664,52376
06-08-2019	NBA Finals	Rocket Mortgage Fieldhouse	20,562	NA
03-12-2022	Superbowl	SoFi Stadium	70,240	71909,46296
02-04-2018	Superbowl	U.S. Bank Stadium	67,612	94793,63669
04-05-2019	NCAA Basketball Championship	U.S. Bank Stadium	72,067	84174,75871



Project Impact to the Community

- Results from 2018-2019 (pre-COVID pandemic) data shows that the attendance to sporting events were not affected.
- Results from 2020-2021 (during COVID pandemic) data shows that attendance to sporting events were highly affected and decreased hence the safety precautions and limited seating in stadiums.
- Results in 2022 (last year of COVID pandemic) data shows that attendance increased once safety precautions were lifted and more seats were available in stadiums.

Future Work

- Look into creating visualizations using RStudio
- Creating a choropleth map



Party Information (References)

NBA

<https://www.nba.com/game/gsw-vs-cle-0041700404>
<https://www.nba.com/game/tor-vs-qsw-0041800406>
<https://www.nba.com/game/lal-vs-mia-0041900406>
<https://www.nba.com/game/phx-vs-mil-0042000406>
<https://www.nba.com/game/gsw-vs-bos-0042100406>

Baseball (World Series)

<https://www.baseball-reference.com/boxes/LAN/LAN201810280.shtml>
<https://www.baseball-reference.com/boxes/HOU/HOU201910300.shtml>
<https://www.baseball-almanac.com/ws/yr2020ws.shtml>
<https://www.baseball-reference.com/boxes/HOU/HOU202111020.shtml>
<https://www.baseball-reference.com/boxes/HOU/HOU202211050.shtml>

NCAA Football Championship

<https://www.ncaa.com/news/football/article/college-football-national-championship-history>
<https://www.ncaa.com/news/football/article/college-football-national-championship-history>
<https://www.ncaa.com/news/football/article/college-football-national-championship-history>
<https://www.ncaa.com/news/football/article/college-football-national-championship-history>
<https://www.ncaa.com/news/football/article/college-football-national-championship-history>

NCAA Basketball Championship

<https://www.ncaa.com/history/basketball-men/d1>
<https://www.ncaa.com/history/basketball-men/d1>
<https://www.ncaa.com/history/basketball-men/d1>
<https://www.ncaa.com/history/basketball-men/d1>