Assignment: Hurricane Harvey Report

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Background and Scope

Import the file StormEvents_2017_finalProject.csv

```
%This section was automatically generated using import tool
%To import your own data change the filepath in line 26
opts = delimitedTextImportOptions("NumVariables", 24);

% Specify range and delimiter
opts.DataLines = [2, Inf];
opts.Delimiter = ",";

% Specify column names and types
opts.VariableNames = ["EpisodeID", "Event_ID", "State", "Year", "Month", "Event_Type", "CZ_Name
opts.VariableTypes = ["double", "double", "categorical", "double", "categorical", "categorical"

% Specify file level properties
opts.ExtraColumnsRule = "ignore";
opts.EmptyLineRule = "read";

% Specify variable properties
opts = setvaropts(opts, "Event_Narrative", "WhitespaceRule", "preserve");
opts = setvaropts(opts, ["State", "Month", "Event_Type", "CZ_Name", "Episode_Narrative", "Event
opts = setvaropts(opts, "Begin_Date_Time", "InputFormat", "yyyy-MM-dd HH:mm:ss");
opts = setvaropts(opts, "End_Date_Time", "InputFormat", "yyyy-MM-dd HH:mm:ss");
opts = setvaropts(opts, ["Timezone", "Damage_Property", "Damage_Crops"], "TrimNonNumeric", true
opts = setvaropts(opts, ["Timezone", "Damage_Property", "Damage_Crops"], "ThousandsSeparator",

% Import the data and write your own filepath inside readtable function
StormEvents2017finalProject = readtable("C:\Users\crist\OneDrive\Ambiente de Trabalho\MIEBB_Dis



clear opts
```

Two States Most Impacted by Harvey

The two states most affected by Hurricane Harvey were Texas and Louisiana

```
StormEvents2017finalProject_Harvey = StormEvents2017finalProject(ismember(StormEvents2017finalP
StormEvents2017finalProject_Harvey = StormEvents2017finalProject_Harvey(ismember(StormEvents201
StormEvents2017finalProject_Harvey = sortrows(StormEvents2017finalProject_Harvey,'Begin_Date_Ti
StormEvents2017finalProject_Harvey = StormEvents2017finalProject_Harvey(228:805,:);
%I tried to select events ranging from 17.08.2017-03.09.2017 from live script, but the selectio
StormEvents2017finalProject_Harvey = StormEvents2017finalProject_Harvey(~ismissing(StormEvents2
%head(StormEvents2017finalProject_Harvey)
%Uncomment to see a preview of 2017 storm events

PropertyCostbyState = groupsummary(StormEvents2017finalProject_Harvey,"State",'sum','Property_C

PropertyCostbyState = PropertyCostbyState(~ismissing(PropertyCostbyState.sum_Property_Cost),:);
PropertyCostbyState = sortrows(PropertyCostbyState,'sum_Property_Cost','descend')
```

PropertyCostbyState = 7×3 table

	State	GroupCount	sum_Property_Cost
1	'TEXAS'	273	7.7427e+10
2	'LOUISIANA'	86	75277000
3	'NORTH C...	54	12338500
4	'MISSISS...	39	915000
5	'TENNESSEE'	46	504000
6	'KENTUCKY'	16	435000
7	'ARKANSAS'	53	61000

Table of Events for Two Most Impacted States

```
TwoMostAffectedStates = StormEvents2017finalProject_Harvey(ismember(StormEvents2017finalProject
head(TwoMostAffectedStates)
```

ans = 8×24 table

...

	EpisodeID	Event_ID	State	Year	Month	Event_Type	CZ_Name
1	119764	718254	'TEXAS'	2017	'August'	'Flash Flood'	'GRAYSON'
2	119764	718259	'TEXAS'	2017	'August'	'Flash Flood'	'GRAYSON'
3	119764	718263	'TEXAS'	2017	'August'	'Flood'	'COLLIN'
4	119764	718260	'TEXAS'	2017	'August'	'Flash Flood'	'DENTON'
5	119764	718253	'TEXAS'	2017	'August'	'Flood'	'KAUFMAN'

	EpisodeID	Event_ID	State	Year	Month	Event_Type	CZ_Name
6	119764	718261	'TEXAS'	2017	'August'	'Flash Flood'	'DALLAS'
7	119764	718262	'TEXAS'	2017	'August'	'Flash Flood'	'DALLAS'
8	119764	718264	'TEXAS'	2017	'August'	'Flood'	'COLLIN'

Visualizations

Figure of Event Types

Create a figure showing the type and number of occurances for events related to Harvey in the two states

```
Texas = TwoMostAffectedStates(string(TwoMostAffectedStates.State) == 'TEXAS',:)
```

Texas = 273×24 table

...

	EpisodeID	Event_ID	State	Year	Month	Event_Type	CZ_Name
1	119764	718254	'TEXAS'	2017	'August'	'Flash Flood'	'GRAYSON'
2	119764	718259	'TEXAS'	2017	'August'	'Flash Flood'	'GRAYSON'
3	119764	718263	'TEXAS'	2017	'August'	'Flood'	'COLLIN'
4	119764	718260	'TEXAS'	2017	'August'	'Flash Flood'	'DENTON'
5	119764	718253	'TEXAS'	2017	'August'	'Flood'	'KAUFMAN'
6	119764	718261	'TEXAS'	2017	'August'	'Flash Flood'	'DALLAS'
7	119764	718262	'TEXAS'	2017	'August'	'Flash Flood'	'DALLAS'
8	119764	718264	'TEXAS'	2017	'August'	'Flood'	'COLLIN'
9	119764	718265	'TEXAS'	2017	'August'	'Flood'	'HUNT'
10	119878	718602	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'COLEMAN'
11	119878	718603	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'TOM GREEN'
12	119556	717411	'TEXAS'	2017	'August'	'Hail'	'SHERMAN'
13	119878	718604	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'CROCKETT'
14	119556	717412	'TEXAS'	2017	'August'	'Hail'	'HUTCHINSON'
15	119556	717413	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'RANDALL'
16	119556	717414	'TEXAS'	2017	'August'	'Hail'	'OCHILTREE'
17	119556	717415	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'OCHILTREE'
18	119556	717416	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'HEMPHILL'
19	117693	707755	'TEXAS'	2017	'August'	'Funnel Cloud'	'GALVESTON'
20	117693	707756	'TEXAS'	2017	'August'	'Funnel Cloud'	'GALVESTON'

	EpisodeID	Event_ID	State	Year	Month	Event_Type	CZ_Name
21	117890	708490	'TEXAS'	2017	'August'	'Heat'	'BOWIE'
22	117890	708491	'TEXAS'	2017	'August'	'Heat'	'PANOLA'
23	117890	708492	'TEXAS'	2017	'August'	'Heat'	'SHELBY'
24	117890	708493	'TEXAS'	2017	'August'	'Heat'	'SABINE'
25	117890	708494	'TEXAS'	2017	'August'	'Heat'	'SAN AUGU...
26	117890	708495	'TEXAS'	2017	'August'	'Heat'	'NACOGDOCHES'
27	117890	708496	'TEXAS'	2017	'August'	'Heat'	'ANGELINA'
28	120132	719823	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'CLAY'
29	117891	708498	'TEXAS'	2017	'August'	'Heat'	'CASS'
30	117891	708499	'TEXAS'	2017	'August'	'Heat'	'MARION'
31	117891	708500	'TEXAS'	2017	'August'	'Heat'	'HARRISON'
32	117891	708501	'TEXAS'	2017	'August'	'Heat'	'GREGG'
33	117891	708503	'TEXAS'	2017	'August'	'Heat'	'RUSK'
34	117836	708282	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'BRISCOE'
35	121602	727805	'TEXAS'	2017	'August'	'Heat'	'HARRIS'
36	118031	709516	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'LUBBOCK'
37	118031	709517	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'HALE'
38	118031	709518	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'MOTLEY'
39	118032	713492	'TEXAS'	2017	'August'	'Heavy Rain'	'SWISHER'
40	118032	709519	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'SWISHER'
41	118032	709520	'TEXAS'	2017	'August'	'Flash Flood'	'SWISHER'
42	118032	711899	'TEXAS'	2017	'August'	'Heavy Rain'	'HOCKLEY'
43	118032	709525	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'HOCKLEY'
44	118032	709521	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'LUBBOCK'
45	118032	709522	'TEXAS'	2017	'August'	'Flash Flood'	'HOCKLEY'
46	118032	709523	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'LYNN'
47	120011	719146	'TEXAS'	2017	'August'	'Flash Flood'	'EL PASO'
48	119753	723472	'TEXAS'	2017	'August'	'Tropical Storm'	'MONTGOMERY'
49	119753	723449	'TEXAS'	2017	'August'	'Tropical Storm'	'GALVESTON'
50	119753	723474	'TEXAS'	2017	'August'	'Tropical Storm'	'SAN JACINTO'
51	119753	723475	'TEXAS'	2017	'August'	'Tropical Storm'	'WALKER'
52	119753	723648	'TEXAS'	2017	'August'	'Tropical Storm'	'POLK'
53	120318	720930	'TEXAS'	2017	'August'	'Tropical Storm'	'KENEDY'

	EpisodeID	Event_ID	State	Year	Month	Event_Type	CZ_Name
54	119753	723649	'TEXAS'	2017	'August'	'Tropical Storm'	'BRAZORIA'
55	119753	723656	'TEXAS'	2017	'August'	'Tropical Storm'	'WHARTON'
56	119753	723657	'TEXAS'	2017	'August'	'Tropical Storm'	'WALLER'
57	119753	723659	'TEXAS'	2017	'August'	'Tropical Storm'	'CHAMBERS'
58	119753	723653	'TEXAS'	2017	'August'	'Tropical Storm'	'GRIMES'
59	119753	723654	'TEXAS'	2017	'August'	'Tropical Storm'	'WASHINGTON'
60	119753	723650	'TEXAS'	2017	'August'	'Tropical Storm'	'BRAZOS'
61	119753	723651	'TEXAS'	2017	'August'	'Tropical Storm'	'BURLESON'
62	119753	723655	'TEXAS'	2017	'August'	'Tropical Storm'	'MADISON'
63	119753	723658	'TEXAS'	2017	'August'	'Tropical Storm'	'LIBERTY'
64	119753	723646	'TEXAS'	2017	'August'	'Tropical Storm'	'MATAGORDA'
65	119753	723647	'TEXAS'	2017	'August'	'Tropical Storm'	'JACKSON'
66	119753	720459	'TEXAS'	2017	'August'	'Tornado'	'GALVESTON'
67	119753	720460	'TEXAS'	2017	'August'	'Tornado'	'BRAZORIA'
68	119859	720926	'TEXAS'	2017	'August'	'Storm Surge/Tide'	'NUECES'
69	119859	720932	'TEXAS'	2017	'August'	'Storm Surge/Tide'	'CALHOUN'
70	119859	718740	'TEXAS'	2017	'August'	'Storm Surge/Tide'	'ARANSAS'
71	119753	720461	'TEXAS'	2017	'August'	'Tornado'	'MATAGORDA'
72	119859	721358	'TEXAS'	2017	'August'	'Tornado'	'CALHOUN'
73	119859	720925	'TEXAS'	2017	'August'	'Hurricane'	'NUECES'
74	119859	718519	'TEXAS'	2017	'August'	'Hurricane'	'ARANSAS'
75	119753	720463	'TEXAS'	2017	'August'	'Tornado'	'BRAZORIA'
76	119853	718515	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'ECTOR'
77	119859	721355	'TEXAS'	2017	'August'	'Tropical Storm'	'KLEBERG'
78	119859	721356	'TEXAS'	2017	'August'	'Tropical Storm'	'JIM WELLS'
79	119859	720923	'TEXAS'	2017	'August'	'Hurricane'	'SAN PATR...
80	119859	720927	'TEXAS'	2017	'August'	'Hurricane'	'CALHOUN'
81	119859	720924	'TEXAS'	2017	'August'	'Storm Surge/Tide'	'SAN PATR...
82	120012	719147	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'EL PASO'
83	120012	719148	'TEXAS'	2017	'August'	'Flash Flood'	'EL PASO'
84	119859	720951	'TEXAS'	2017	'August'	'Hurricane'	'REFUGIO'
85	119753	720467	'TEXAS'	2017	'August'	'Funnel Cloud'	'BRAZORIA'
86	119859	721357	'TEXAS'	2017	'August'	'Tropical Storm'	'LIVE OAK'

	EpisodeID	Event_ID	State	Year	Month	Event_Type	CZ_Name
87	119859	720983	'TEXAS'	2017	'August'	'Storm Surge/Tide'	'REFUGIO'
88	119753	720466	'TEXAS'	2017	'August'	'Tornado'	'BRAZORIA'
89	119753	720470	'TEXAS'	2017	'August'	'Tornado'	'BRAZORIA'
90	119753	721321	'TEXAS'	2017	'August'	'Flash Flood'	'JACKSON'
91	119753	720473	'TEXAS'	2017	'August'	'Tornado'	'FORT BEND'
92	119753	767027	'TEXAS'	2017	'August'	'Tornado'	'BRAZORIA'
93	119753	720471	'TEXAS'	2017	'August'	'Tornado'	'FORT BEND'
94	119753	720477	'TEXAS'	2017	'August'	'Tornado'	'FORT BEND'
95	119753	723473	'TEXAS'	2017	'August'	'Tropical Storm'	'FORT BEND'
96	119753	720336	'TEXAS'	2017	'August'	'Flash Flood'	'FORT BEND'
97	119753	723471	'TEXAS'	2017	'August'	'Tropical Storm'	'HARRIS'
98	119859	721354	'TEXAS'	2017	'August'	'Hurricane'	'BEE'
99	119859	721002	'TEXAS'	2017	'August'	'Hurricane'	'GOLIAD'
100	119859	721006	'TEXAS'	2017	'August'	'Hurricane'	'VICTORIA'

⋮

```
Louisiana = TwoMostAffectedStates(string(TwoMostAffectedStates.State) == 'LOUISIANA',:)
```

Louisiana = 86×24 table

...

	EpisodeID	Event_ID	State	Year	Month	Event_Type	CZ_Name
1	117887	708470	'LOUISIANA'	2017	'August'	'Heat'	'CADDO'
2	117887	708471	'LOUISIANA'	2017	'August'	'Heat'	'BOSSIER'
3	117887	708472	'LOUISIANA'	2017	'August'	'Heat'	'DE SOTO'
4	117887	708473	'LOUISIANA'	2017	'August'	'Heat'	'RED RIVER'
5	117887	708474	'LOUISIANA'	2017	'August'	'Heat'	'BIENVILLE'
6	117887	708475	'LOUISIANA'	2017	'August'	'Heat'	'WEBSTER'
7	117887	708477	'LOUISIANA'	2017	'August'	'Heat'	'CLAIBORNE'
8	117887	708478	'LOUISIANA'	2017	'August'	'Heat'	'LINCOLN'
9	117887	708479	'LOUISIANA'	2017	'August'	'Heat'	'JACKSON'
10	117887	708480	'LOUISIANA'	2017	'August'	'Heat'	'UNION'
11	117887	708481	'LOUISIANA'	2017	'August'	'Heat'	'OUACHITA'
12	117887	708482	'LOUISIANA'	2017	'August'	'Heat'	'CALDWELL'
13	117887	708483	'LOUISIANA'	2017	'August'	'Heat'	'WINN'
14	117887	708484	'LOUISIANA'	2017	'August'	'Heat'	'LA SALLE'

	EpisodeID	Event_ID	State	Year	Month	Event_Type	CZ_Name
15	117887	708485	'LOUISIANA'	2017	'August'	'Heat'	'GRANT'
16	117887	708486	'LOUISIANA'	2017	'August'	'Heat'	'NATCHITO...
17	117887	708487	'LOUISIANA'	2017	'August'	'Heat'	'SABINE'
18	120120	720001	'LOUISIANA'	2017	'August'	'Tornado'	'CAMERON'
19	120120	719999	'LOUISIANA'	2017	'August'	'Storm Surge/Tide'	'VERMILION'
20	120120	720000	'LOUISIANA'	2017	'August'	'Storm Surge/Tide'	'ST. MARY'
21	120120	719998	'LOUISIANA'	2017	'August'	'Storm Surge/Tide'	'EAST CAM...
22	120120	719997	'LOUISIANA'	2017	'August'	'Storm Surge/Tide'	'WEST CAM...
23	120120	719749	'LOUISIANA'	2017	'August'	'Flash Flood'	'CALCASIEU'
24	120120	720002	'LOUISIANA'	2017	'August'	'Tornado'	'VERMILION'
25	120120	720003	'LOUISIANA'	2017	'August'	'Tornado'	'IBERIA'
26	120120	720007	'LOUISIANA'	2017	'August'	'Tornado'	'CAMERON'
27	120120	719755	'LOUISIANA'	2017	'August'	'Flash Flood'	'BEAUREGARD'
28	120120	720008	'LOUISIANA'	2017	'August'	'Flash Flood'	'VERMILION'
29	118732	713264	'LOUISIANA'	2017	'August'	'Flash Flood'	'LAFOURCHE'
30	118732	713266	'LOUISIANA'	2017	'August'	'Flash Flood'	'ST. CHARLES'
31	118732	713267	'LOUISIANA'	2017	'August'	'Flash Flood'	'ST. JAMES'
32	120120	720004	'LOUISIANA'	2017	'August'	'Tornado'	'VERMILION'
33	120120	720006	'LOUISIANA'	2017	'August'	'Tornado'	'ACADIA'
34	120120	720005	'LOUISIANA'	2017	'August'	'Tornado'	'LAFAYETTE'
35	118386	711416	'LOUISIANA'	2017	'August'	'Flash Flood'	'SABINE'
36	118386	711417	'LOUISIANA'	2017	'August'	'Flash Flood'	'SABINE'
37	120120	719742	'LOUISIANA'	2017	'August'	'Flood'	'CAMERON'
38	118386	711418	'LOUISIANA'	2017	'August'	'Flash Flood'	'SABINE'
39	118386	711419	'LOUISIANA'	2017	'August'	'Flash Flood'	'RED RIVER'
40	118386	711420	'LOUISIANA'	2017	'August'	'Flash Flood'	'SABINE'
41	118386	711421	'LOUISIANA'	2017	'August'	'Flash Flood'	'RED RIVER'
42	118386	711422	'LOUISIANA'	2017	'August'	'Flash Flood'	'SABINE'
43	118386	711423	'LOUISIANA'	2017	'August'	'Flash Flood'	'NATCHITO...
44	118386	711424	'LOUISIANA'	2017	'August'	'Flash Flood'	'NATCHITO...
45	118386	711425	'LOUISIANA'	2017	'August'	'Flash Flood'	'SABINE'
46	118386	711426	'LOUISIANA'	2017	'August'	'Flash Flood'	'SABINE'
47	118386	711427	'LOUISIANA'	2017	'August'	'Flash Flood'	'NATCHITO...

	EpisodeID	Event_ID	State	Year	Month	Event_Type	CZ_Name
48	118386	711428	'LOUISIANA'	2017	'August'	'Flash Flood'	'NATCHITO...
49	118386	711562	'LOUISIANA'	2017	'August'	'Flash Flood'	'NATCHITO...
50	118386	711429	'LOUISIANA'	2017	'August'	'Flash Flood'	'SABINE'
51	118386	711430	'LOUISIANA'	2017	'August'	'Flash Flood'	'NATCHITO...
52	118386	711431	'LOUISIANA'	2017	'August'	'Flash Flood'	'NATCHITO...
53	118386	711538	'LOUISIANA'	2017	'August'	'Flash Flood'	'DE SOTO'
54	118386	711539	'LOUISIANA'	2017	'August'	'Flash Flood'	'SABINE'
55	118916	714375	'LOUISIANA'	2017	'August'	'Tropical Storm'	'SABINE'
56	118916	714376	'LOUISIANA'	2017	'August'	'Tropical Storm'	'NATCHITO...
57	118916	714377	'LOUISIANA'	2017	'August'	'Tropical Storm'	'UNION'
58	118386	711559	'LOUISIANA'	2017	'August'	'Flash Flood'	'NATCHITO...
59	118386	711563	'LOUISIANA'	2017	'August'	'Flash Flood'	'NATCHITO...
60	118386	711564	'LOUISIANA'	2017	'August'	'Flash Flood'	'NATCHITO...
61	118386	711565	'LOUISIANA'	2017	'August'	'Flash Flood'	'NATCHITO...
62	118386	711566	'LOUISIANA'	2017	'August'	'Flash Flood'	'NATCHITO...
63	118386	711567	'LOUISIANA'	2017	'August'	'Flash Flood'	'NATCHITO...
64	118386	711569	'LOUISIANA'	2017	'August'	'Flash Flood'	'NATCHITO...
65	118386	711570	'LOUISIANA'	2017	'August'	'Flash Flood'	'NATCHITO...
66	118386	711541	'LOUISIANA'	2017	'August'	'Flash Flood'	'SABINE'
67	118386	711542	'LOUISIANA'	2017	'August'	'Flash Flood'	'SABINE'
68	118386	711543	'LOUISIANA'	2017	'August'	'Flash Flood'	'SABINE'
69	118386	711544	'LOUISIANA'	2017	'August'	'Flash Flood'	'SABINE'
70	118386	711560	'LOUISIANA'	2017	'August'	'Flash Flood'	'NATCHITO...
71	118386	711546	'LOUISIANA'	2017	'August'	'Flash Flood'	'NATCHITO...
72	118386	711547	'LOUISIANA'	2017	'August'	'Flash Flood'	'NATCHITO...
73	118386	711548	'LOUISIANA'	2017	'August'	'Flash Flood'	'WINN'
74	118386	711549	'LOUISIANA'	2017	'August'	'Flash Flood'	'DE SOTO'
75	118386	711550	'LOUISIANA'	2017	'August'	'Flash Flood'	'NATCHITO...
76	118386	711551	'LOUISIANA'	2017	'August'	'Flash Flood'	'RED RIVER'
77	118386	711561	'LOUISIANA'	2017	'August'	'Flash Flood'	'RED RIVER'
78	118386	714252	'LOUISIANA'	2017	'August'	'Flash Flood'	'RED RIVER'
79	118386	714253	'LOUISIANA'	2017	'August'	'Flash Flood'	'RED RIVER'
80	118386	711553	'LOUISIANA'	2017	'August'	'Flash Flood'	'WINN'

	EpisodeID	Event_ID	State	Year	Month	Event_Type	CZ_Name
81	118386	711554	'LOUISIANA'	2017	'August'	'Flash Flood'	'WINN'
82	118386	711555	'LOUISIANA'	2017	'August'	'Flash Flood'	'WINN'
83	118386	711556	'LOUISIANA'	2017	'August'	'Flash Flood'	'WINN'
84	118386	711557	'LOUISIANA'	2017	'August'	'Flash Flood'	'RED RIVER'
85	118386	711558	'LOUISIANA'	2017	'August'	'Flash Flood'	'RED RIVER'
86	120567	722286	'LOUISIANA'	2017	'September'	'Flood'	'CAMERON'

```
histogram(categorical(Texas.Event_Type))
hold on
histogram(categorical(Louisiana.Event_Type))
hold off

title('Event Occurences Related to Hurricane Hurvey in Texas & Louisiana')
xlabel('Event Types')
ylabel('No of Occurences')

legend('show', 'Texas', 'Louisiana')
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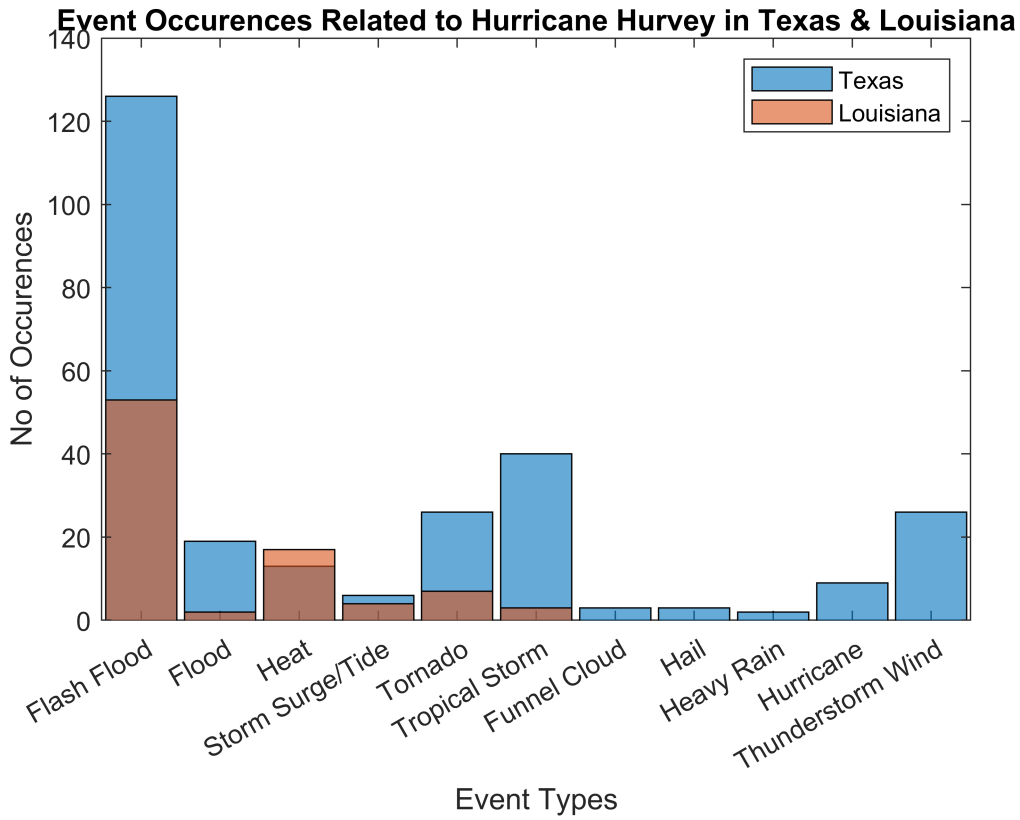


Figure of Event Locations

Show the location of events in the two states. Be sure to use different markers for the two states

```
TwoMostAffectedStates = StormEvents2017finalProject_Harvey(ismember(StormEvents2017finalProject

TwoMostAffectedStates
```

TwoMostAffectedStates = 359×24 table

...

	EpisodeID	Event_ID	State	Year	Month	Event_Type	CZ_Name
1	119764	718254	'TEXAS'	2017	'August'	'Flash Flood'	'GRAYSON'
2	119764	718259	'TEXAS'	2017	'August'	'Flash Flood'	'GRAYSON'
3	119764	718263	'TEXAS'	2017	'August'	'Flood'	'COLLIN'
4	119764	718260	'TEXAS'	2017	'August'	'Flash Flood'	'DENTON'
5	119764	718253	'TEXAS'	2017	'August'	'Flood'	'KAUFMAN'
6	119764	718261	'TEXAS'	2017	'August'	'Flash Flood'	'DALLAS'
7	119764	718262	'TEXAS'	2017	'August'	'Flash Flood'	'DALLAS'
8	119764	718264	'TEXAS'	2017	'August'	'Flood'	'COLLIN'
9	119764	718265	'TEXAS'	2017	'August'	'Flood'	'HUNT'
10	119878	718602	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'COLEMAN'
11	119878	718603	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'TOM GREEN'
12	119556	717411	'TEXAS'	2017	'August'	'Hail'	'SHERMAN'
13	119878	718604	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'CROCKETT'
14	119556	717412	'TEXAS'	2017	'August'	'Hail'	'HUTCHINSON'
15	119556	717413	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'RANDALL'
16	119556	717414	'TEXAS'	2017	'August'	'Hail'	'OCHILTREE'
17	119556	717415	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'OCHILTREE'
18	119556	717416	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'HEMPHILL'
19	117693	707755	'TEXAS'	2017	'August'	'Funnel Cloud'	'GALVESTON'
20	117693	707756	'TEXAS'	2017	'August'	'Funnel Cloud'	'GALVESTON'
21	117887	708470	'LOUISIANA'	2017	'August'	'Heat'	'CADDO'
22	117887	708471	'LOUISIANA'	2017	'August'	'Heat'	'BOSSIER'
23	117887	708472	'LOUISIANA'	2017	'August'	'Heat'	'DE SOTO'
24	117887	708473	'LOUISIANA'	2017	'August'	'Heat'	'RED RIVER'
25	117887	708474	'LOUISIANA'	2017	'August'	'Heat'	'BIENVILLE'
26	117887	708475	'LOUISIANA'	2017	'August'	'Heat'	'WEBSTER'
27	117887	708477	'LOUISIANA'	2017	'August'	'Heat'	'CLAIBORNE'
28	117887	708478	'LOUISIANA'	2017	'August'	'Heat'	'LINCOLN'
29	117887	708479	'LOUISIANA'	2017	'August'	'Heat'	'JACKSON'

	EpisodeID	Event_ID	State	Year	Month	Event_Type	CZ_Name
30	117887	708480	'LOUISIANA'	2017	'August'	'Heat'	'UNION'
31	117887	708481	'LOUISIANA'	2017	'August'	'Heat'	'OUACHITA'
32	117887	708482	'LOUISIANA'	2017	'August'	'Heat'	'CALDWELL'
33	117887	708483	'LOUISIANA'	2017	'August'	'Heat'	'WINN'
34	117887	708484	'LOUISIANA'	2017	'August'	'Heat'	'LA SALLE'
35	117887	708485	'LOUISIANA'	2017	'August'	'Heat'	'GRANT'
36	117887	708486	'LOUISIANA'	2017	'August'	'Heat'	'NATCHITO...
37	117887	708487	'LOUISIANA'	2017	'August'	'Heat'	'SABINE'
38	117890	708490	'TEXAS'	2017	'August'	'Heat'	'BOWIE'
39	117890	708491	'TEXAS'	2017	'August'	'Heat'	'PANOLA'
40	117890	708492	'TEXAS'	2017	'August'	'Heat'	'SHELBY'
41	117890	708493	'TEXAS'	2017	'August'	'Heat'	'SABINE'
42	117890	708494	'TEXAS'	2017	'August'	'Heat'	'SAN AUGU...
43	117890	708495	'TEXAS'	2017	'August'	'Heat'	'NACOGDOCHES'
44	117890	708496	'TEXAS'	2017	'August'	'Heat'	'ANGELINA'
45	120132	719823	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'CLAY'
46	117891	708498	'TEXAS'	2017	'August'	'Heat'	'CASS'
47	117891	708499	'TEXAS'	2017	'August'	'Heat'	'MARION'
48	117891	708500	'TEXAS'	2017	'August'	'Heat'	'HARRISON'
49	117891	708501	'TEXAS'	2017	'August'	'Heat'	'GREGG'
50	117891	708503	'TEXAS'	2017	'August'	'Heat'	'RUSK'
51	117836	708282	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'BRISCOE'
52	121602	727805	'TEXAS'	2017	'August'	'Heat'	'HARRIS'
53	118031	709516	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'LUBBOCK'
54	118031	709517	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'HALE'
55	118031	709518	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'MOTLEY'
56	118032	713492	'TEXAS'	2017	'August'	'Heavy Rain'	'SWISHER'
57	118032	709519	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'SWISHER'
58	118032	709520	'TEXAS'	2017	'August'	'Flash Flood'	'SWISHER'
59	118032	711899	'TEXAS'	2017	'August'	'Heavy Rain'	'HOCKLEY'
60	118032	709525	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'HOCKLEY'
61	118032	709521	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'LUBBOCK'
62	118032	709522	'TEXAS'	2017	'August'	'Flash Flood'	'HOCKLEY'

	EpisodeID	Event_ID	State	Year	Month	Event_Type	CZ_Name
63	118032	709523	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'LYNN'
64	120011	719146	'TEXAS'	2017	'August'	'Flash Flood'	'EL PASO'
65	119753	723472	'TEXAS'	2017	'August'	'Tropical Storm'	'MONTGOMERY'
66	119753	723449	'TEXAS'	2017	'August'	'Tropical Storm'	'GALVESTON'
67	119753	723474	'TEXAS'	2017	'August'	'Tropical Storm'	'SAN JACINTO'
68	119753	723475	'TEXAS'	2017	'August'	'Tropical Storm'	'WALKER'
69	119753	723648	'TEXAS'	2017	'August'	'Tropical Storm'	'POLK'
70	120318	720930	'TEXAS'	2017	'August'	'Tropical Storm'	'KENEDY'
71	119753	723649	'TEXAS'	2017	'August'	'Tropical Storm'	'BRAZORIA'
72	119753	723656	'TEXAS'	2017	'August'	'Tropical Storm'	'WHARTON'
73	119753	723657	'TEXAS'	2017	'August'	'Tropical Storm'	'WALLER'
74	119753	723659	'TEXAS'	2017	'August'	'Tropical Storm'	'CHAMBERS'
75	119753	723653	'TEXAS'	2017	'August'	'Tropical Storm'	'GRIMES'
76	119753	723654	'TEXAS'	2017	'August'	'Tropical Storm'	'WASHINGTON'
77	119753	723650	'TEXAS'	2017	'August'	'Tropical Storm'	'BRAZOS'
78	119753	723651	'TEXAS'	2017	'August'	'Tropical Storm'	'BURLESON'
79	119753	723655	'TEXAS'	2017	'August'	'Tropical Storm'	'MADISON'
80	119753	723658	'TEXAS'	2017	'August'	'Tropical Storm'	'LIBERTY'
81	119753	723646	'TEXAS'	2017	'August'	'Tropical Storm'	'MATAGORDA'
82	119753	723647	'TEXAS'	2017	'August'	'Tropical Storm'	'JACKSON'
83	119753	720459	'TEXAS'	2017	'August'	'Tornado'	'GALVESTON'
84	119753	720460	'TEXAS'	2017	'August'	'Tornado'	'BRAZORIA'
85	119859	720926	'TEXAS'	2017	'August'	'Storm Surge/Tide'	'NUECES'
86	119859	720932	'TEXAS'	2017	'August'	'Storm Surge/Tide'	'CALHOUN'
87	119859	718740	'TEXAS'	2017	'August'	'Storm Surge/Tide'	'ARANSAS'
88	119753	720461	'TEXAS'	2017	'August'	'Tornado'	'MATAGORDA'
89	119859	721358	'TEXAS'	2017	'August'	'Tornado'	'CALHOUN'
90	119859	720925	'TEXAS'	2017	'August'	'Hurricane'	'NUECES'
91	119859	718519	'TEXAS'	2017	'August'	'Hurricane'	'ARANSAS'
92	119753	720463	'TEXAS'	2017	'August'	'Tornado'	'BRAZORIA'
93	119853	718515	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'ECTOR'
94	119859	721355	'TEXAS'	2017	'August'	'Tropical Storm'	'KLEBERG'
95	119859	721356	'TEXAS'	2017	'August'	'Tropical Storm'	'JIM WELLS'

	EpisodeID	Event_ID	State	Year	Month	Event_Type	CZ_Name
96	119859	720923	'TEXAS'	2017	'August'	'Hurricane'	'SAN PATR...
97	119859	720927	'TEXAS'	2017	'August'	'Hurricane'	'CALHOUN'
98	119859	720924	'TEXAS'	2017	'August'	'Storm Surge/Tide'	'SAN PATR...
99	120012	719147	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'EL PASO'
100	120012	719148	'TEXAS'	2017	'August'	'Flash Flood'	'EL PASO'

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TwoMostAffectedStates = TwoMostAffectedStates(~ismissing(TwoMostAffectedStates.State),:)
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TwoMostAffectedStates = 359×24 table

...

	EpisodeID	Event_ID	State	Year	Month	Event_Type	CZ_Name
1	119764	718254	'TEXAS'	2017	'August'	'Flash Flood'	'GRAYSON'
2	119764	718259	'TEXAS'	2017	'August'	'Flash Flood'	'GRAYSON'
3	119764	718263	'TEXAS'	2017	'August'	'Flood'	'COLLIN'
4	119764	718260	'TEXAS'	2017	'August'	'Flash Flood'	'DENTON'
5	119764	718253	'TEXAS'	2017	'August'	'Flood'	'KAUFMAN'
6	119764	718261	'TEXAS'	2017	'August'	'Flash Flood'	'DALLAS'
7	119764	718262	'TEXAS'	2017	'August'	'Flash Flood'	'DALLAS'
8	119764	718264	'TEXAS'	2017	'August'	'Flood'	'COLLIN'
9	119764	718265	'TEXAS'	2017	'August'	'Flood'	'HUNT'
10	119878	718602	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'COLEMAN'
11	119878	718603	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'TOM GREEN'
12	119556	717411	'TEXAS'	2017	'August'	'Hail'	'SHERMAN'
13	119878	718604	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'CROCKETT'
14	119556	717412	'TEXAS'	2017	'August'	'Hail'	'HUTCHINSON'
15	119556	717413	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'RANDALL'
16	119556	717414	'TEXAS'	2017	'August'	'Hail'	'OCHILTREE'
17	119556	717415	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'OCHILTREE'
18	119556	717416	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'HEMPHILL'
19	117693	707755	'TEXAS'	2017	'August'	'Funnel Cloud'	'GALVESTON'
20	117693	707756	'TEXAS'	2017	'August'	'Funnel Cloud'	'GALVESTON'
21	117887	708470	'LOUISIANA'	2017	'August'	'Heat'	'CADDO'
22	117887	708471	'LOUISIANA'	2017	'August'	'Heat'	'BOSSIER'
23	117887	708472	'LOUISIANA'	2017	'August'	'Heat'	'DE SOTO'

	EpisodeID	Event_ID	State	Year	Month	Event_Type	CZ_Name
24	117887	708473	'LOUISIANA'	2017	'August'	'Heat'	'RED RIVER'
25	117887	708474	'LOUISIANA'	2017	'August'	'Heat'	'BIENVILLE'
26	117887	708475	'LOUISIANA'	2017	'August'	'Heat'	'WEBSTER'
27	117887	708477	'LOUISIANA'	2017	'August'	'Heat'	'CLAIBORNE'
28	117887	708478	'LOUISIANA'	2017	'August'	'Heat'	'LINCOLN'
29	117887	708479	'LOUISIANA'	2017	'August'	'Heat'	'JACKSON'
30	117887	708480	'LOUISIANA'	2017	'August'	'Heat'	'UNION'
31	117887	708481	'LOUISIANA'	2017	'August'	'Heat'	'OUACHITA'
32	117887	708482	'LOUISIANA'	2017	'August'	'Heat'	'CALDWELL'
33	117887	708483	'LOUISIANA'	2017	'August'	'Heat'	'WINN'
34	117887	708484	'LOUISIANA'	2017	'August'	'Heat'	'LA SALLE'
35	117887	708485	'LOUISIANA'	2017	'August'	'Heat'	'GRANT'
36	117887	708486	'LOUISIANA'	2017	'August'	'Heat'	'NATCHITO...
37	117887	708487	'LOUISIANA'	2017	'August'	'Heat'	'SABINE'
38	117890	708490	'TEXAS'	2017	'August'	'Heat'	'BOWIE'
39	117890	708491	'TEXAS'	2017	'August'	'Heat'	'PANOLA'
40	117890	708492	'TEXAS'	2017	'August'	'Heat'	'SHELBY'
41	117890	708493	'TEXAS'	2017	'August'	'Heat'	'SABINE'
42	117890	708494	'TEXAS'	2017	'August'	'Heat'	'SAN AUGU...
43	117890	708495	'TEXAS'	2017	'August'	'Heat'	'NACOGDOCHES'
44	117890	708496	'TEXAS'	2017	'August'	'Heat'	'ANGELINA'
45	120132	719823	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'CLAY'
46	117891	708498	'TEXAS'	2017	'August'	'Heat'	'CASS'
47	117891	708499	'TEXAS'	2017	'August'	'Heat'	'MARION'
48	117891	708500	'TEXAS'	2017	'August'	'Heat'	'HARRISON'
49	117891	708501	'TEXAS'	2017	'August'	'Heat'	'GREGG'
50	117891	708503	'TEXAS'	2017	'August'	'Heat'	'RUSK'
51	117836	708282	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'BRISCOE'
52	121602	727805	'TEXAS'	2017	'August'	'Heat'	'HARRIS'
53	118031	709516	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'LUBBOCK'
54	118031	709517	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'HALE'
55	118031	709518	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'MOTLEY'
56	118032	713492	'TEXAS'	2017	'August'	'Heavy Rain'	'SWISHER'

	EpisodeID	Event_ID	State	Year	Month	Event_Type	CZ_Name
57	118032	709519	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'SWISHER'
58	118032	709520	'TEXAS'	2017	'August'	'Flash Flood'	'SWISHER'
59	118032	711899	'TEXAS'	2017	'August'	'Heavy Rain'	'HOCKLEY'
60	118032	709525	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'HOCKLEY'
61	118032	709521	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'LUBBOCK'
62	118032	709522	'TEXAS'	2017	'August'	'Flash Flood'	'HOCKLEY'
63	118032	709523	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'LYNN'
64	120011	719146	'TEXAS'	2017	'August'	'Flash Flood'	'EL PASO'
65	119753	723472	'TEXAS'	2017	'August'	'Tropical Storm'	'MONTGOMERY'
66	119753	723449	'TEXAS'	2017	'August'	'Tropical Storm'	'GALVESTON'
67	119753	723474	'TEXAS'	2017	'August'	'Tropical Storm'	'SAN JACINTO'
68	119753	723475	'TEXAS'	2017	'August'	'Tropical Storm'	'WALKER'
69	119753	723648	'TEXAS'	2017	'August'	'Tropical Storm'	'POLK'
70	120318	720930	'TEXAS'	2017	'August'	'Tropical Storm'	'KENEDY'
71	119753	723649	'TEXAS'	2017	'August'	'Tropical Storm'	'BRAZORIA'
72	119753	723656	'TEXAS'	2017	'August'	'Tropical Storm'	'WHARTON'
73	119753	723657	'TEXAS'	2017	'August'	'Tropical Storm'	'WALLER'
74	119753	723659	'TEXAS'	2017	'August'	'Tropical Storm'	'CHAMBERS'
75	119753	723653	'TEXAS'	2017	'August'	'Tropical Storm'	'GRIMES'
76	119753	723654	'TEXAS'	2017	'August'	'Tropical Storm'	'WASHINGTON'
77	119753	723650	'TEXAS'	2017	'August'	'Tropical Storm'	'BRAZOS'
78	119753	723651	'TEXAS'	2017	'August'	'Tropical Storm'	'BURLESON'
79	119753	723655	'TEXAS'	2017	'August'	'Tropical Storm'	'MADISON'
80	119753	723658	'TEXAS'	2017	'August'	'Tropical Storm'	'LIBERTY'
81	119753	723646	'TEXAS'	2017	'August'	'Tropical Storm'	'MATAGORDA'
82	119753	723647	'TEXAS'	2017	'August'	'Tropical Storm'	'JACKSON'
83	119753	720459	'TEXAS'	2017	'August'	'Tornado'	'GALVESTON'
84	119753	720460	'TEXAS'	2017	'August'	'Tornado'	'BRAZORIA'
85	119859	720926	'TEXAS'	2017	'August'	'Storm Surge/Tide'	'NUECES'
86	119859	720932	'TEXAS'	2017	'August'	'Storm Surge/Tide'	'CALHOUN'
87	119859	718740	'TEXAS'	2017	'August'	'Storm Surge/Tide'	'ARANSAS'
88	119753	720461	'TEXAS'	2017	'August'	'Tornado'	'MATAGORDA'
89	119859	721358	'TEXAS'	2017	'August'	'Tornado'	'CALHOUN'

	EpisodeID	Event_ID	State	Year	Month	Event_Type	CZ_Name
90	119859	720925	'TEXAS'	2017	'August'	'Hurricane'	'NUECES'
91	119859	718519	'TEXAS'	2017	'August'	'Hurricane'	'ARANSAS'
92	119753	720463	'TEXAS'	2017	'August'	'Tornado'	'BRAZORIA'
93	119853	718515	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'ECTOR'
94	119859	721355	'TEXAS'	2017	'August'	'Tropical Storm'	'KLEBERG'
95	119859	721356	'TEXAS'	2017	'August'	'Tropical Storm'	'JIM WELLS'
96	119859	720923	'TEXAS'	2017	'August'	'Hurricane'	'SAN PATR...
97	119859	720927	'TEXAS'	2017	'August'	'Hurricane'	'CALHOUN'
98	119859	720924	'TEXAS'	2017	'August'	'Storm Surge/Tide'	'SAN PATR...
99	120012	719147	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'EL PASO'
100	120012	719148	'TEXAS'	2017	'August'	'Flash Flood'	'EL PASO'

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TwoMostAffectedStates = TwoMostAffectedStates(~ismissing(TwoMostAffectedStates.State),:)
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TwoMostAffectedStates = 359×24 table

...

	EpisodeID	Event_ID	State	Year	Month	Event_Type	CZ_Name
1	119764	718254	'TEXAS'	2017	'August'	'Flash Flood'	'GRAYSON'
2	119764	718259	'TEXAS'	2017	'August'	'Flash Flood'	'GRAYSON'
3	119764	718263	'TEXAS'	2017	'August'	'Flood'	'COLLIN'
4	119764	718260	'TEXAS'	2017	'August'	'Flash Flood'	'DENTON'
5	119764	718253	'TEXAS'	2017	'August'	'Flood'	'KAUFMAN'
6	119764	718261	'TEXAS'	2017	'August'	'Flash Flood'	'DALLAS'
7	119764	718262	'TEXAS'	2017	'August'	'Flash Flood'	'DALLAS'
8	119764	718264	'TEXAS'	2017	'August'	'Flood'	'COLLIN'
9	119764	718265	'TEXAS'	2017	'August'	'Flood'	'HUNT'
10	119878	718602	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'COLEMAN'
11	119878	718603	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'TOM GREEN'
12	119556	717411	'TEXAS'	2017	'August'	'Hail'	'SHERMAN'
13	119878	718604	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'CROCKETT'
14	119556	717412	'TEXAS'	2017	'August'	'Hail'	'HUTCHINSON'
15	119556	717413	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'RANDALL'
16	119556	717414	'TEXAS'	2017	'August'	'Hail'	'OCHILTREE'
17	119556	717415	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'OCHILTREE'

	EpisodeID	Event_ID	State	Year	Month	Event_Type	CZ_Name
18	119556	717416	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'HEMPHILL'
19	117693	707755	'TEXAS'	2017	'August'	'Funnel Cloud'	'GALVESTON'
20	117693	707756	'TEXAS'	2017	'August'	'Funnel Cloud'	'GALVESTON'
21	117887	708470	'LOUISIANA'	2017	'August'	'Heat'	'CADDO'
22	117887	708471	'LOUISIANA'	2017	'August'	'Heat'	'BOSSIER'
23	117887	708472	'LOUISIANA'	2017	'August'	'Heat'	'DE SOTO'
24	117887	708473	'LOUISIANA'	2017	'August'	'Heat'	'RED RIVER'
25	117887	708474	'LOUISIANA'	2017	'August'	'Heat'	'BIENVILLE'
26	117887	708475	'LOUISIANA'	2017	'August'	'Heat'	'WEBSTER'
27	117887	708477	'LOUISIANA'	2017	'August'	'Heat'	'CLAIBORNE'
28	117887	708478	'LOUISIANA'	2017	'August'	'Heat'	'LINCOLN'
29	117887	708479	'LOUISIANA'	2017	'August'	'Heat'	'JACKSON'
30	117887	708480	'LOUISIANA'	2017	'August'	'Heat'	'UNION'
31	117887	708481	'LOUISIANA'	2017	'August'	'Heat'	'OUACHITA'
32	117887	708482	'LOUISIANA'	2017	'August'	'Heat'	'CALDWELL'
33	117887	708483	'LOUISIANA'	2017	'August'	'Heat'	'WINN'
34	117887	708484	'LOUISIANA'	2017	'August'	'Heat'	'LA SALLE'
35	117887	708485	'LOUISIANA'	2017	'August'	'Heat'	'GRANT'
36	117887	708486	'LOUISIANA'	2017	'August'	'Heat'	'NATCHITO...
37	117887	708487	'LOUISIANA'	2017	'August'	'Heat'	'SABINE'
38	117890	708490	'TEXAS'	2017	'August'	'Heat'	'BOWIE'
39	117890	708491	'TEXAS'	2017	'August'	'Heat'	'PANOLA'
40	117890	708492	'TEXAS'	2017	'August'	'Heat'	'SHELBY'
41	117890	708493	'TEXAS'	2017	'August'	'Heat'	'SABINE'
42	117890	708494	'TEXAS'	2017	'August'	'Heat'	'SAN AUGU...
43	117890	708495	'TEXAS'	2017	'August'	'Heat'	'NACOGDOCHES'
44	117890	708496	'TEXAS'	2017	'August'	'Heat'	'ANGELINA'
45	120132	719823	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'CLAY'
46	117891	708498	'TEXAS'	2017	'August'	'Heat'	'CASS'
47	117891	708499	'TEXAS'	2017	'August'	'Heat'	'MARION'
48	117891	708500	'TEXAS'	2017	'August'	'Heat'	'HARRISON'
49	117891	708501	'TEXAS'	2017	'August'	'Heat'	'GREGG'
50	117891	708503	'TEXAS'	2017	'August'	'Heat'	'RUSK'

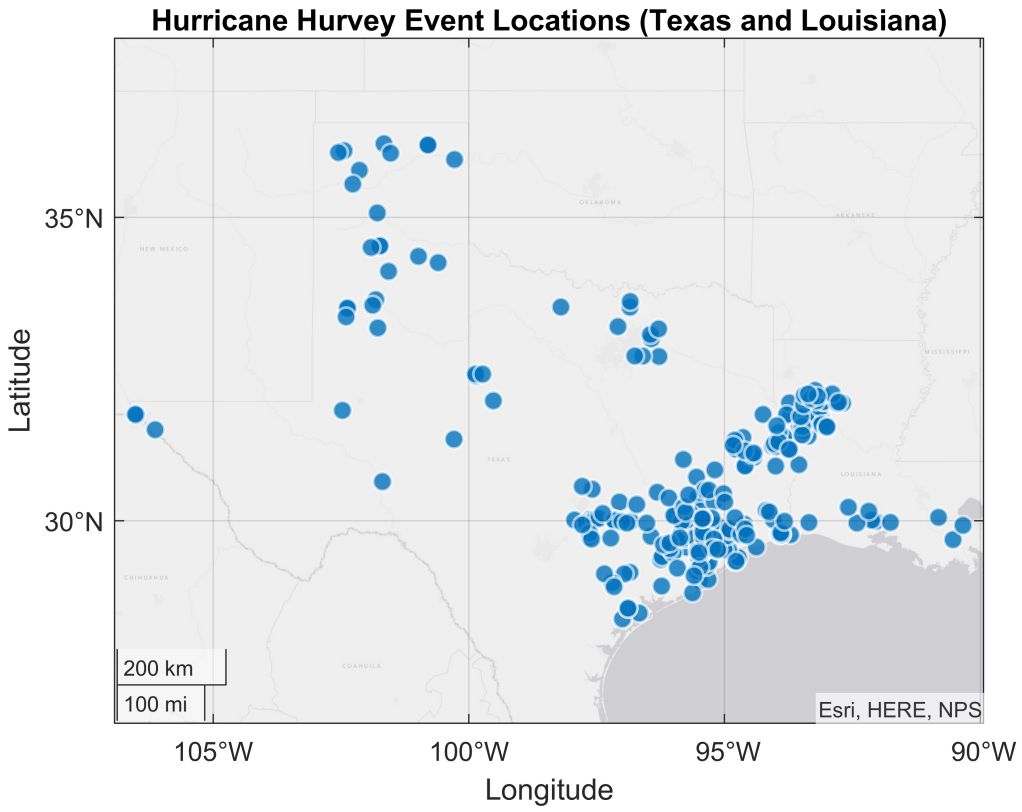
	EpisodeID	Event_ID	State	Year	Month	Event_Type	CZ_Name
51	117836	708282	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'BRISCOE'
52	121602	727805	'TEXAS'	2017	'August'	'Heat'	'HARRIS'
53	118031	709516	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'LUBBOCK'
54	118031	709517	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'HALE'
55	118031	709518	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'MOTLEY'
56	118032	713492	'TEXAS'	2017	'August'	'Heavy Rain'	'SWISHER'
57	118032	709519	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'SWISHER'
58	118032	709520	'TEXAS'	2017	'August'	'Flash Flood'	'SWISHER'
59	118032	711899	'TEXAS'	2017	'August'	'Heavy Rain'	'HOCKLEY'
60	118032	709525	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'HOCKLEY'
61	118032	709521	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'LUBBOCK'
62	118032	709522	'TEXAS'	2017	'August'	'Flash Flood'	'HOCKLEY'
63	118032	709523	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'LYNN'
64	120011	719146	'TEXAS'	2017	'August'	'Flash Flood'	'EL PASO'
65	119753	723472	'TEXAS'	2017	'August'	'Tropical Storm'	'MONTGOMERY'
66	119753	723449	'TEXAS'	2017	'August'	'Tropical Storm'	'GALVESTON'
67	119753	723474	'TEXAS'	2017	'August'	'Tropical Storm'	'SAN JACINTO'
68	119753	723475	'TEXAS'	2017	'August'	'Tropical Storm'	'WALKER'
69	119753	723648	'TEXAS'	2017	'August'	'Tropical Storm'	'POLK'
70	120318	720930	'TEXAS'	2017	'August'	'Tropical Storm'	'KENEDY'
71	119753	723649	'TEXAS'	2017	'August'	'Tropical Storm'	'BRAZORIA'
72	119753	723656	'TEXAS'	2017	'August'	'Tropical Storm'	'WHARTON'
73	119753	723657	'TEXAS'	2017	'August'	'Tropical Storm'	'WALLER'
74	119753	723659	'TEXAS'	2017	'August'	'Tropical Storm'	'CHAMBERS'
75	119753	723653	'TEXAS'	2017	'August'	'Tropical Storm'	'GRIMES'
76	119753	723654	'TEXAS'	2017	'August'	'Tropical Storm'	'WASHINGTON'
77	119753	723650	'TEXAS'	2017	'August'	'Tropical Storm'	'BRAZOS'
78	119753	723651	'TEXAS'	2017	'August'	'Tropical Storm'	'BURLESON'
79	119753	723655	'TEXAS'	2017	'August'	'Tropical Storm'	'MADISON'
80	119753	723658	'TEXAS'	2017	'August'	'Tropical Storm'	'LIBERTY'
81	119753	723646	'TEXAS'	2017	'August'	'Tropical Storm'	'MATAGORDA'
82	119753	723647	'TEXAS'	2017	'August'	'Tropical Storm'	'JACKSON'
83	119753	720459	'TEXAS'	2017	'August'	'Tornado'	'GALVESTON'

	EpisodeID	Event_ID	State	Year	Month	Event_Type	CZ_Name
84	119753	720460	'TEXAS'	2017	'August'	'Tornado'	'BRAZORIA'
85	119859	720926	'TEXAS'	2017	'August'	'Storm Surge/Tide'	'NUECES'
86	119859	720932	'TEXAS'	2017	'August'	'Storm Surge/Tide'	'CALHOUN'
87	119859	718740	'TEXAS'	2017	'August'	'Storm Surge/Tide'	'ARANSAS'
88	119753	720461	'TEXAS'	2017	'August'	'Tornado'	'MATAGORDA'
89	119859	721358	'TEXAS'	2017	'August'	'Tornado'	'CALHOUN'
90	119859	720925	'TEXAS'	2017	'August'	'Hurricane'	'NUECES'
91	119859	718519	'TEXAS'	2017	'August'	'Hurricane'	'ARANSAS'
92	119753	720463	'TEXAS'	2017	'August'	'Tornado'	'BRAZORIA'
93	119853	718515	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'ECTOR'
94	119859	721355	'TEXAS'	2017	'August'	'Tropical Storm'	'KLEBERG'
95	119859	721356	'TEXAS'	2017	'August'	'Tropical Storm'	'JIM WELLS'
96	119859	720923	'TEXAS'	2017	'August'	'Hurricane'	'SAN PATR...
97	119859	720927	'TEXAS'	2017	'August'	'Hurricane'	'CALHOUN'
98	119859	720924	'TEXAS'	2017	'August'	'Storm Surge/Tide'	'SAN PATR...
99	120012	719147	'TEXAS'	2017	'August'	'Thunderstorm Wind'	'EL PASO'
100	120012	719148	'TEXAS'	2017	'August'	'Flash Flood'	'EL PASO'

⋮

```
geobubble(TwoMostAffectedStates.Begin_Lat,TwoMostAffectedStates.Begin_Lon)

legend show
title('Hurricane Hurvey Event Locations (Texas and Louisiana)')
```



Analysis

Three Counties with Most Events in State 1-Texas

Either type out, show in a table, or show in a clear visualization the three counties with the most events in state 1.

```
MostEventsCountiesTexas = groupsummary(Texas,"CZ_Name" , 'sum', 'Property_Cost');

MostEventsCountiesTexas = sortrows(MostEventsCountiesTexas,'GroupCount','descend');
MostEventsCountiesTexas = MostEventsCountiesTexas(1:3,:)
```

MostEventsCountiesTexas = 3×3 table

	CZ_Name	GroupCount	sum_Property_Cost
1	'HARRIS'	21	1.0001e+10
2	'GALVESTON'	17	2.0000e+10
3	'FORT BEND'	13	1.6004e+10

Top three counties with most events in Texas are Harris, Galvestion and Fort Bend

Three Counties with Most Events in State 2- Louisiana

Either type out, show in a table, or show in a clear visualization the three counties with the most events in state 2.

```
MostEventsCountiesLouisiana = groupsummary(Louisiana,"CZ_Name",'sum', 'Property_Cost');

MostEventsCountiesLouisiana = sortrows(MostEventsCountiesLouisiana,'GroupCount','descend');
MostEventsCountiesLouisiana = MostEventsCountiesLouisiana(1:3,:)
```

MostEventsCountiesLouisiana = 3×3 table

	CZ_Name	GroupCount	sum_Property_Cost
1	'NATCHITO...	21	0
2	'SABINE'	15	0
3	'RED RIVER'	9	0

Top three counties with most events in Louisiana are Natchitoches, Sabine and Red River.

Three Counties with Highest Property Cost in State 1- Texas

Either type out, show in a table, or show in a clear visualization the three counties with the highest reported property cost in state 1. *Be sure to include the dollar amount*.

```
MostPropCosCountiesTexas = groupsummary(Texas,"CZ_Name", 'sum', 'Property_Cost');

MostPropCosCountiesTexas = sortrows(MostPropCosCountiesTexas,'sum_Property_Cost','descend');
MostPropCosCountiesTexas = MostPropCosCountiesTexas(1:3,:)
```

MostPropCosCountiesTexas = 3×3 table

	CZ_Name	GroupCount	sum_Property_Cost
1	'GALVESTON'	17	2.0000e+10
2	'FORT BEND'	13	1.6004e+10
3	'MONTGOMERY'	6	1.4000e+10

Three Counties with Highest Property Cost in State 2 - Louisiana

Either type out, show in a table, or show in a clear visualization the three counties with the highest reported property cost in state 2. *Be sure to include the dollar amount*.

```
MostPropCosCountiesLouisiana = groupsummary(Louisiana,"CZ_Name", 'sum', 'Property_Cost');

MostPropCosCountiesLouisiana = sortrows(MostPropCosCountiesLouisiana,'sum_Property_Cost','desce
MostPropCosCountiesLouisiana = MostPropCosCountiesLouisiana(1:3,:)
```

MostPropCosCountiesLouisiana = 3×3 table

	CZ_Name	GroupCount	sum_Property_Cost
1	'CALCASIEU'	1	60000000
2	'BEAUREGARD'	1	15000000
3	'ACADIA'	1	200000

Conclusions and Recommendations

The insurance company should send people to places with high number of Events and high Property Damage Cost.

Texas

1. Galveston
2. Fort Bend
3. Montgomery

Louisiana

1. Calcasieu
2. Beauregard
3. Acadia