```
clear, clc
```

Resource allocation after Hurricane Harvey

Table of Contents

How to use the template

There are many organize and communicate your results. To help ensure your peer-reviewers can accurately grade your report, this report includes the titles for the 4 required sections in Heading 1 style. Each required element for a given section has a Heading 2 area for you to place the final result.

Make sure to place your required findings in the appropiate area for your peer-reviewer to easily find them.

Also, only the heading titles are present. *The script is not broken into sections*.

Background and Scope

Import the Data

You may use an import function. If not using an import function, include the code used to import the data (it may be generated from the Import Tool)

Script for importing data from the following text file:

```
filename: D:\archive\Coursera\MATLAB data analysis\Course 1\StormEvents\StormEvents_2017_finalProject.csv
```

Auto-generated by MATLAB on 15-Sep-2022 09:36:29

```
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
StormEvents2017finalProject = readtable("D:\archive\Coursera\MATLAB data analysis\Course 1\Stor
```

StormEvents2017finalProject = 57005×24 table

...

	EpisodeID	Event_ID	State	Year	Month	Event_Type
1	113355	678791	NEW JERSEY	2017	April	Thunderstorm Wind
2	113459	679228	FLORIDA	2017	April	Tornado
3	113448	679268	OHIO	2017	April	Thunderstorm Wind
4	113697	682042	OHIO	2017	April	Flood
5	113683	682062	NEBRASKA	2017	April	Hail
6	114718	688082	INDIANA	2017	April	Flash Flood
7	114834	688895	VIRGINIA	2017	April	Thunderstorm Wind
8	121068	724772	GULF OF ME...	2017	October	Marine Thunderstorm Wind
9	114489	686560	OHIO	2017	April	Flash Flood
10	113683	682156	NEBRASKA	2017	April	Thunderstorm Wind
11	115066	690966	ARKANSAS	2017	April	Hail
12	121162	725317	OKLAHOMA	2017	October	Hail
13	120474	721817	ATLANTIC N...	2017	October	Marine Strong Wind
14	120474	721818	ATLANTIC N...	2017	October	Marine High Wind
15	112855	675876	PENNSYLVANIA	2017	March	Winter Weather
16	112855	675879	PENNSYLVANIA	2017	March	Winter Weather
17	112855	675877	PENNSYLVANIA	2017	March	Winter Weather
18	113797	681330	WISCONSIN	2017	February	Winter Weather
19	113797	681332	WISCONSIN	2017	February	Winter Weather
20	115634	694778	GULF OF ME...	2017	June	Marine Thunderstorm Wind
21	115688	695188	FLORIDA	2017	June	Thunderstorm Wind
22	115811	696020	GULF OF ME...	2017	June	Marine Thunderstorm Wind
23	115811	696023	GULF OF ME...	2017	June	Marine Thunderstorm Wind

	EpisodeID	Event_ID	State	Year	Month	Event_Type
24	115752	695727	MONTANA	2017	June	Hail
25	115752	695729	MONTANA	2017	June	Hail
26	115752	695740	MONTANA	2017	June	Thunderstorm Wind
27	113797	681331	WISCONSIN	2017	February	Winter Weather
28	113797	681333	WISCONSIN	2017	February	Winter Weather
29	113797	681334	WISCONSIN	2017	February	Winter Weather
30	113797	681336	WISCONSIN	2017	February	Winter Weather
31	115176	691471	GULF OF ME...	2017	June	Waterspout
32	115176	691472	GULF OF ME...	2017	June	Waterspout
33	115634	694777	GULF OF ME...	2017	June	Marine Thunderstorm Wind
34	112855	675883	PENNSYLVANIA	2017	March	Winter Weather
35	113797	681282	WISCONSIN	2017	February	Winter Weather
36	115811	696124	GULF OF ME...	2017	June	Marine Thunderstorm Wind
37	115811	696134	GULF OF ME...	2017	June	Marine Thunderstorm Wind
38	115811	696176	GULF OF ME...	2017	June	Marine Thunderstorm Wind
39	115811	696179	GULF OF ME...	2017	June	Marine Thunderstorm Wind
40	115902	696463	FLORIDA	2017	June	Thunderstorm Wind
41	115904	696474	GULF OF ME...	2017	June	Marine Thunderstorm Wind
42	115940	696653	GULF OF ME...	2017	June	Marine Thunderstorm Wind
43	116635	701349	FLORIDA	2017	June	Flash Flood
44	116635	701350	FLORIDA	2017	June	Flash Flood
45	116635	701351	FLORIDA	2017	June	Flash Flood
46	116636	701352	FLORIDA	2017	June	Flash Flood
47	116636	701353	FLORIDA	2017	June	Flash Flood
48	116636	701354	FLORIDA	2017	June	Flood
49	116636	701355	FLORIDA	2017	June	Flood
50	115691	698754	MISSOURI	2017	June	Thunderstorm Wind
51	115691	698756	MISSOURI	2017	June	Thunderstorm Wind
52	116224	698777	KANSAS	2017	June	Hail
53	116224	698778	KANSAS	2017	June	Hail
54	116224	698779	KANSAS	2017	June	Thunderstorm Wind
55	116224	698780	KANSAS	2017	June	Thunderstorm Wind
56	116224	698781	KANSAS	2017	June	Thunderstorm Wind

	EpisodeID	Event_ID	State	Year	Month	Event_Type
57	116224	698782	KANSAS	2017	June	Hail
58	115691	698760	MISSOURI	2017	June	Thunderstorm Wind
59	115691	698761	MISSOURI	2017	June	Thunderstorm Wind
60	115691	698762	MISSOURI	2017	June	Thunderstorm Wind
61	115691	698763	MISSOURI	2017	June	Thunderstorm Wind
62	115691	698764	MISSOURI	2017	June	Thunderstorm Wind
63	115691	698765	MISSOURI	2017	June	Heavy Rain
64	115691	698766	MISSOURI	2017	June	Heavy Rain
65	116222	698768	MISSOURI	2017	June	Flash Flood
66	116222	698769	MISSOURI	2017	June	Flash Flood
67	116222	698770	MISSOURI	2017	June	Hail
68	116636	701356	FLORIDA	2017	June	Flood
69	116636	701357	FLORIDA	2017	June	Flood
70	115330	692444	ATLANTIC S...	2017	June	Marine Thunderstorm Wind
71	115330	692448	ATLANTIC S...	2017	June	Marine Thunderstorm Wind
72	115330	692453	ATLANTIC S...	2017	June	Marine Thunderstorm Wind
73	115691	698751	MISSOURI	2017	June	Lightning
74	115691	698752	MISSOURI	2017	June	Thunderstorm Wind
75	115691	698753	MISSOURI	2017	June	Thunderstorm Wind
76	115691	698757	MISSOURI	2017	June	Thunderstorm Wind
77	115691	698758	MISSOURI	2017	June	Thunderstorm Wind
78	115691	698759	MISSOURI	2017	June	Thunderstorm Wind
79	116222	698771	MISSOURI	2017	June	Thunderstorm Wind
80	116222	698772	MISSOURI	2017	June	Thunderstorm Wind
81	116222	698773	MISSOURI	2017	June	Thunderstorm Wind
82	116222	698774	MISSOURI	2017	June	Thunderstorm Wind
83	116224	698775	KANSAS	2017	June	Hail
84	116224	698776	KANSAS	2017	June	Hail
85	116224	698783	KANSAS	2017	June	Thunderstorm Wind
86	116224	698784	KANSAS	2017	June	Thunderstorm Wind
87	116224	698785	KANSAS	2017	June	Thunderstorm Wind
88	115940	696657	GULF OF ME...	2017	June	Waterspout
89	115968	696991	FLORIDA	2017	June	Thunderstorm Wind

	EpisodeID	Event_ID	State	Year	Month	Event_Type
90	115966	697003	GULF OF ME...	2017	June	Marine Thunderstorm Wind
91	115966	697015	GULF OF ME...	2017	June	Marine Thunderstorm Wind
92	115992	697128	GULF OF ME...	2017	June	Waterspout
93	116634	701344	ALABAMA	2017	June	Thunderstorm Wind
94	116632	701345	ALABAMA	2017	June	Thunderstorm Wind
95	116224	698786	KANSAS	2017	June	Thunderstorm Wind
96	116224	698787	KANSAS	2017	June	Thunderstorm Wind
97	116224	698788	KANSAS	2017	June	Thunderstorm Wind
98	116224	698789	KANSAS	2017	June	Thunderstorm Wind
99	116224	698790	KANSAS	2017	June	Thunderstorm Wind
100	116225	698801	MISSOURI	2017	June	Thunderstorm Wind

⋮

```
clear opts % clear temporary variables
```

Two States Most Impacted by Harvey

Clearly state the two states in order

According to Wikipedia, hurricane Harvey occured from 17 August, 2017 to 2 September, 2017. Therefore, only the events from this duration are listed

```
HurricaneEvents = StormEvents2017finalProject( ...
    datetime(2017,8,17) <= StormEvents2017finalProject.Begin_Date_Time & ...
StormEvents2017finalProject.End_Date_Time <= datetime(2017,9,2),:);
```

In this case, we assume the missing values as no damage to property cost and crop cost. The total cost equals to the sum of property cost and crop cost. After that, we summarize the table by states and sum all total cost by each state.

```
% replace missing variables with 0 (assume no damage property cost and
% crop cost for NaN inputs
HurricaneEvents.Property_Cost(ismissing(HurricaneEvents.Property_Cost)) = 0;
HurricaneEvents.Crop_Cost(ismissing(HurricaneEvents.Crop_Cost)) = 0;
% sum property cost with crop cost as total cost
HurricaneEvents.Total_Cost = HurricaneEvents.Property_Cost ...
    + HurricaneEvents.Crop_Cost;
% categorize all events by states. Sum total cost for each state and
% reordering from largest to smallest total cost
totalCostByStates = groupsummary(HurricaneEvents,"State","sum", ...
    "Total_Cost","IncludeMissingGroups",false);
totalCostByStates = sortrows(totalCostByStates,"sum_Total_Cost","descend", ...
    "MissingPlacement","last")
```

```
totalCostByStates = 56×3 table
```

	State	GroupCount	sum_Total_Cost
1	TEXAS	268	7.7493e+10
2	LOUISIANA	85	75277000
3	NEBRASKA	62	16154000
4	NORTH CARO...	58	12338500
5	WASHINGTON	2	4000000
6	FLORIDA	68	2237000
7	MINNESOTA	21	1625000
8	MISSISSIPPI	39	915000
9	NEW YORK	109	641000
10	TENNESSEE	38	504000
11	IOWA	54	498000
12	PENNSYLVANIA	203	491630
13	KENTUCKY	20	435000
14	INDIANA	6	300000
15	NORTH DAKOTA	17	143000
16	CALIFORNIA	35	120000
17	OHIO	48	112500
18	IDAHO	11	111000
19	MASSACHUSE...	17	95700
20	VERMONT	9	67000
21	ARKANSAS	52	61000
22	SOUTH CARO...	33	54000
23	MISSOURI	78	49000
24	MICHIGAN	5	45000
25	GEORGIA	34	36000
26	ARIZONA	10	25000
27	VIRGINIA	64	23000
28	WEST VIRGI...	9	20100
29	SOUTH DAKOTA	89	12000
30	HAWAII	10	10000
31	ALABAMA	16	5000
32	NEVADA	10	5000
33	OKLAHOMA	34	2000

	State	GroupCount	sum_Total_Cost
34	NEW MEXICO	15	800
35	AMERICAN S...	1	0
36	ATLANTIC N...	62	0
37	ATLANTIC S...	17	0
38	COLORADO	7	0
39	DELAWARE	4	0
40	DISTRICT O...	4	0
41	E PACIFIC	1	0
42	GULF OF ME...	60	0
43	ILLINOIS	30	0
44	KANSAS	64	0
45	LAKE ERIE	5	0
46	LAKE MICHI...	5	0
47	LAKE ONTARIO	1	0
48	MAINE	3	0
49	MARYLAND	64	0
50	MONTANA	6	0
51	NEW HAMPSH...	21	0
52	NEW JERSEY	26	0
53	OREGON	2	0
54	PUERTO RICO	33	0
55	UTAH	2	0
56	WISCONSIN	4	0

The 2 states which has the highest total cost is shown below:

```
% extract 2 most damaged states
State1 = totalCostByStates.State(1);
State2 = totalCostByStates.State(2);
totalCostByStates([1 2], "State")
```

ans = 2×1 table

	State
1	TEXAS
2	LOUISIANA

Table of Events for Two Most Impacted States

Create and display a few rows of events that include only the two most affected states

```
HurricaneEvents(ismember(HurricaneEvents.State,totalCostByStates.State([1,2])),:)
```

ans = 353×25 table

...

	EpisodeID	Event_ID	State	Year	Month	Event_Type	CZ_Name
1	119753	723472	TEXAS	2017	August	Tropical Storm	MONTGOMERY
2	119753	723473	TEXAS	2017	August	Tropical Storm	FORT BEND
3	119753	723449	TEXAS	2017	August	Tropical Storm	GALVESTON
4	119753	723474	TEXAS	2017	August	Tropical Storm	SAN JACINTO
5	119753	723475	TEXAS	2017	August	Tropical Storm	WALKER
6	119753	723648	TEXAS	2017	August	Tropical Storm	POLK
7	120011	719146	TEXAS	2017	August	Flash Flood	EL PASO
8	120012	719147	TEXAS	2017	August	Thunderstorm Wind	EL PASO
9	120012	719148	TEXAS	2017	August	Flash Flood	EL PASO
10	119746	719493	TEXAS	2017	August	Flash Flood	HARDIN
11	119746	719496	TEXAS	2017	August	Flash Flood	JASPER
12	119746	719497	TEXAS	2017	August	Flash Flood	NEWTON
13	119753	720340	TEXAS	2017	August	Flash Flood	FORT BEND
14	119826	718436	TEXAS	2017	August	Thunderstorm Wind	MIDLAND
15	117836	708282	TEXAS	2017	August	Thunderstorm Wind	BRISCOE
16	119746	719740	TEXAS	2017	August	Thunderstorm Wind	JASPER
17	119746	720010	TEXAS	2017	August	Flood	ORANGE
18	119753	720464	TEXAS	2017	August	Flash Flood	MONTGOMERY
19	119853	718515	TEXAS	2017	August	Thunderstorm Wind	ECTOR
20	119746	719342	TEXAS	2017	August	Flash Flood	JEFFERSON
21	119753	720344	TEXAS	2017	August	Flash Flood	GALVESTON
22	117887	708470	LOUISIANA	2017	August	Heat	CADDO
23	117887	708471	LOUISIANA	2017	August	Heat	BOSSIER
24	117887	708472	LOUISIANA	2017	August	Heat	DE SOTO
25	117887	708473	LOUISIANA	2017	August	Heat	RED RIVER
26	118032	709519	TEXAS	2017	August	Thunderstorm Wind	SWISHER
27	118916	714375	LOUISIANA	2017	August	Tropical Storm	SABINE
28	118330	711050	TEXAS	2017	August	Flash Flood	ANGELINA
29	118330	711054	TEXAS	2017	August	Flash Flood	ANGELINA
30	118330	711059	TEXAS	2017	August	Flash Flood	ANGELINA

	EpisodeID	Event_ID	State	Year	Month	Event_Type	CZ_Name
31	118330	711060	TEXAS	2017	August	Flash Flood	ANGELINA
32	119753	721087	TEXAS	2017	August	Flash Flood	SAN JACINTO
33	119753	720859	TEXAS	2017	August	Flash Flood	GALVESTON
34	117887	708474	LOUISIANA	2017	August	Heat	BIENVILLE
35	117887	708475	LOUISIANA	2017	August	Heat	WEBSTER
36	117887	708477	LOUISIANA	2017	August	Heat	CLAIBORNE
37	117887	708478	LOUISIANA	2017	August	Heat	LINCOLN
38	117887	708479	LOUISIANA	2017	August	Heat	JACKSON
39	118032	709521	TEXAS	2017	August	Thunderstorm Wind	LUBBOCK
40	118916	714376	LOUISIANA	2017	August	Tropical Storm	NATCHITOC...
41	118916	714377	LOUISIANA	2017	August	Tropical Storm	UNION
42	118330	711063	TEXAS	2017	August	Flash Flood	ANGELINA
43	118032	709520	TEXAS	2017	August	Flash Flood	SWISHER
44	118032	709525	TEXAS	2017	August	Thunderstorm Wind	HOCKLEY
45	120132	719823	TEXAS	2017	August	Thunderstorm Wind	CLAY
46	119753	720465	TEXAS	2017	August	Flash Flood	GALVESTON
47	117887	708480	LOUISIANA	2017	August	Heat	UNION
48	117887	708481	LOUISIANA	2017	August	Heat	OUACHITA
49	117887	708482	LOUISIANA	2017	August	Heat	CALDWELL
50	117887	708483	LOUISIANA	2017	August	Heat	WINN
51	117887	708484	LOUISIANA	2017	August	Heat	LA SALLE
52	120318	720930	TEXAS	2017	August	Tropical Storm	KENEDY
53	118032	709522	TEXAS	2017	August	Flash Flood	HOCKLEY
54	118032	709523	TEXAS	2017	August	Thunderstorm Wind	LYNN
55	118032	711899	TEXAS	2017	August	Heavy Rain	HOCKLEY
56	118330	711072	TEXAS	2017	August	Flash Flood	SABINE
57	118330	711078	TEXAS	2017	August	Flash Flood	SAN AUGUS...
58	118330	711079	TEXAS	2017	August	Flash Flood	SABINE
59	118330	711081	TEXAS	2017	August	Flash Flood	SABINE
60	118330	711083	TEXAS	2017	August	Flash Flood	ANGELINA
61	118330	711089	TEXAS	2017	August	Flash Flood	ANGELINA
62	118330	711090	TEXAS	2017	August	Flash Flood	ANGELINA
63	118330	711092	TEXAS	2017	August	Flash Flood	SABINE

	EpisodeID	Event_ID	State	Year	Month	Event_Type	CZ_Name
64	118330	711405	TEXAS	2017	August	Flash Flood	SABINE
65	118330	711407	TEXAS	2017	August	Flash Flood	SABINE
66	118330	711408	TEXAS	2017	August	Flash Flood	SABINE
67	118330	711409	TEXAS	2017	August	Flash Flood	SABINE
68	118330	711412	TEXAS	2017	August	Flash Flood	ANGELINA
69	119556	717411	TEXAS	2017	August	Hail	SHERMAN
70	119753	720858	TEXAS	2017	August	Flash Flood	HARRIS
71	119753	720860	TEXAS	2017	August	Flash Flood	HARRIS
72	117887	708485	LOUISIANA	2017	August	Heat	GRANT
73	117887	708486	LOUISIANA	2017	August	Heat	NATCHITOC...
74	117887	708487	LOUISIANA	2017	August	Heat	SABINE
75	117891	708498	TEXAS	2017	August	Heat	CASS
76	118330	711413	TEXAS	2017	August	Flash Flood	SHELBY
77	118330	711414	TEXAS	2017	August	Flash Flood	SHELBY
78	118330	711415	TEXAS	2017	August	Flash Flood	SABINE
79	118386	711416	LOUISIANA	2017	August	Flash Flood	SABINE
80	118386	711417	LOUISIANA	2017	August	Flash Flood	SABINE
81	118386	711418	LOUISIANA	2017	August	Flash Flood	SABINE
82	118386	711419	LOUISIANA	2017	August	Flash Flood	RED RIVER
83	118386	711420	LOUISIANA	2017	August	Flash Flood	SABINE
84	118386	711421	LOUISIANA	2017	August	Flash Flood	RED RIVER
85	118386	711422	LOUISIANA	2017	August	Flash Flood	SABINE
86	118386	711423	LOUISIANA	2017	August	Flash Flood	NATCHITOC...
87	118386	711424	LOUISIANA	2017	August	Flash Flood	NATCHITOC...
88	119556	717412	TEXAS	2017	August	Hail	HUTCHINSON
89	119556	717413	TEXAS	2017	August	Thunderstorm Wind	RANDALL
90	119565	717436	TEXAS	2017	August	Thunderstorm Wind	HARTLEY
91	119753	721098	TEXAS	2017	August	Flash Flood	AUSTIN
92	117891	708499	TEXAS	2017	August	Heat	MARION
93	117891	708500	TEXAS	2017	August	Heat	HARRISON
94	117891	708501	TEXAS	2017	August	Heat	GREGG
95	117891	708503	TEXAS	2017	August	Heat	RUSK
96	118386	711425	LOUISIANA	2017	August	Flash Flood	SABINE

	EpisodeID	Event_ID	State	Year	Month	Event_Type	CZ_Name
97	118386	711426	LOUISIANA	2017	August	Flash Flood	SABINE
98	118386	711427	LOUISIANA	2017	August	Flash Flood	NATCHITOC...
99	118386	711428	LOUISIANA	2017	August	Flash Flood	NATCHITOC...
100	118386	711429	LOUISIANA	2017	August	Flash Flood	SABINE

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Visualizations

Figure of Event Types

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

```
HarveyEventTypes = HurricaneEvents(ismember(HurricaneEvents.State,totalCostByStates.State(1:2)),:);
HarveyEventTypes = groupsummary(HarveyEventTypes,"Event_Type");
HarveyEventTypes = HarveyEventTypes(HarveyEventTypes.GroupCount>0,:)
```

HarveyEventTypes = 11×2 table

	Event_Type	GroupCount
1	Flash Flood	179
2	Flood	16
3	Funnel Cloud	3
4	Hail	3
5	Heat	30
6	Heavy Rain	2
7	Hurricane	9
8	Storm Surge/Tide	10
9	Thunderstorm Wind	24
10	Tornado	33
11	Tropical Storm	44

```
figure
pareto(HarveyEventTypes.GroupCount,HarveyEventTypes.Event_Type)
% axes 1
grid on
title('Events caused by Hurricane Harvey 2017')
xlabel('Event types')
ylabel('Number of events')
```

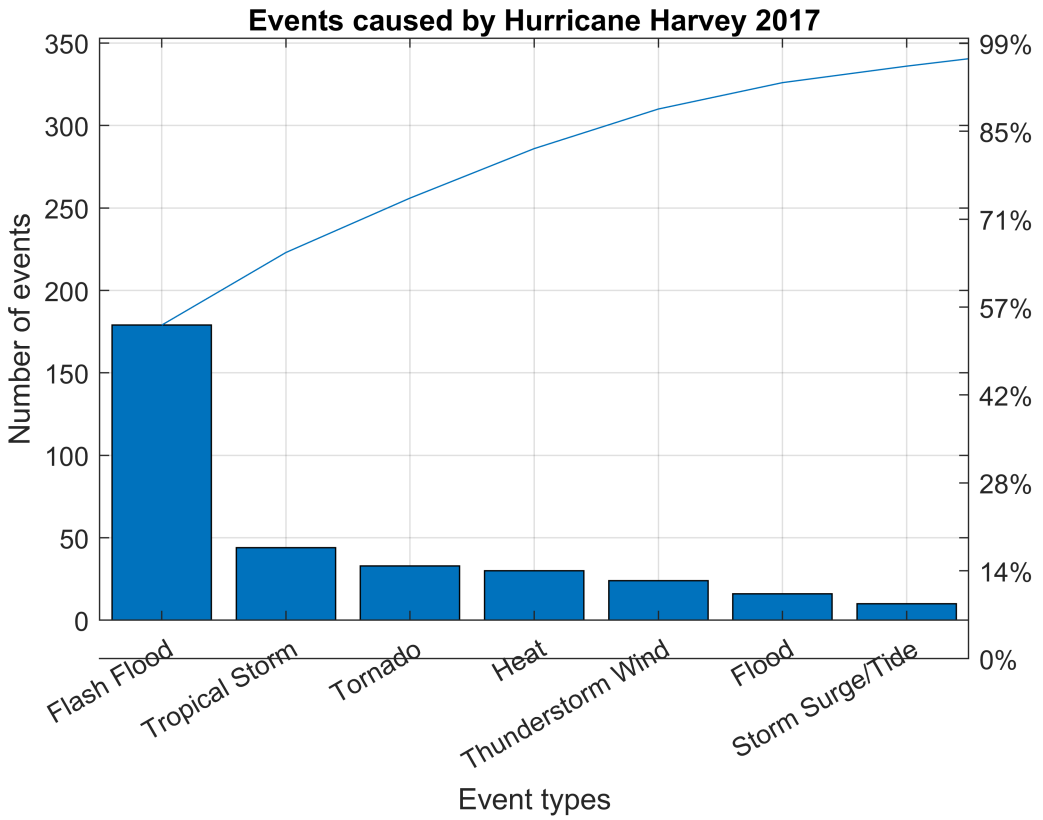
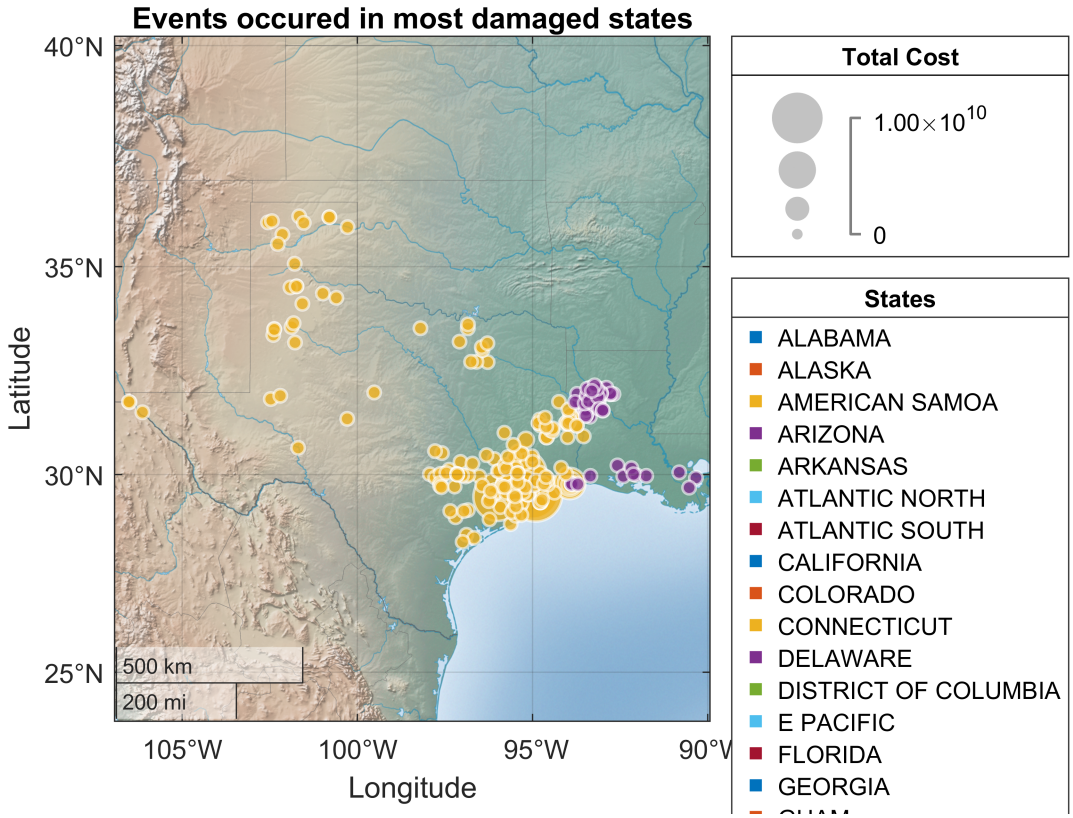


Figure of Event Locations

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

```
clf, figure % my legend has error and I don't know how to solve it :(
states = HurricaneEvents(ismember(HurricaneEvents.State,totalCostByStates.State([1 2])),:);
geobubble(states,"Begin_Lat","Begin_Lon",SizeVariable="Total_Cost",ColorVariable="State", ...
    LegendVisible="on",Title='Events occured in most damaged states',Basemap='colorterrain', ..
    ColorLegendTitle="States",SizeLegendTitle="Total Cost")
```



Analysis

Three Counties with Most Events in State 1

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

```
state1Events = HurricaneEvents(HurricaneEvents.State==State1,:);
top3CountiesState1 = groupsummary(state1Events,"CZ_Name","sum","Property_Cost");
top3eventCountiesState1 = sortrows(top3CountiesState1,"GroupCount","descend","MissingPlacement"
top3eventCountiesState1 = top3eventCountiesState1(1:3,{'CZ_Name','GroupCount'})
```

top3eventCountiesState1 = 3×2 table

	CZ_Name	GroupCount
1	HARRIS	21
2	GALVESTON	17
3	FORT BEND	13

Three Counties with Most Events in State 2

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

```
state2Events = HurricaneEvents(HurricaneEvents.State==State2,:);
top3CountiesState2 = groupsummary(state2Events,"CZ_Name","sum","Property_Cost");
top3eventCountiesState2 = sortrows(top3CountiesState2,"GroupCount","descend","MissingPlacement"
```

```
top3eventCountiesState2 = top3eventCountiesState2(1:3,{'CZ_Name','GroupCount'})
```

top3eventCountiesState2 = 3×2 table

	CZ_Name	GroupCount
1	NATCHITOC...	21
2	SABINE	15
3	RED RIVER	9

Three Counties with Highest Property Cost in State 1

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*.

```
top3propertyCostCountiesState1 = sortrows(top3CountiesState1,"sum_Property_Cost", ...
    "descend","MissingPlacement","last");
top3propertyCostCountiesState1 = top3propertyCostCountiesState1(1:3, ...
    {'CZ_Name','sum_Property_Cost'})
```

top3propertyCostCountiesState1 = 3×2 table

	CZ_Name	sum_Property_Cost
1	GALVESTON	2.0000e+10
2	FORT BEND	1.6004e+10
3	MONTGOMERY	1.4000e+10

Three Counties with Highest Property Cost in State 2

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*.

```
top3propertyCostCountiesState2 = sortrows(top3CountiesState2,"sum_Property_Cost", ...
    "descend","MissingPlacement","last");
top3propertyCostCountiesState2 = top3propertyCostCountiesState2(1:3, ...
    {'CZ_Name','sum_Property_Cost'})
```

top3propertyCostCountiesState2 = 3×2 table

	CZ_Name	sum_Property_Cost
1	CALCASIEU	60000000
2	BEAUREGARD	15000000
3	ACADIA	200000

Conclusions and Recommendations.

Conclusion: It is best to provide allocate support for Galveston, Fort Bend, Montgomery counties in Texas first because the damaged property cost is the highest. Harris, Galveston, and Fort Bend are the states that need support regularly after treating the first 3 states in emergency. The same strategy applies to State 2, which is Louisiana.