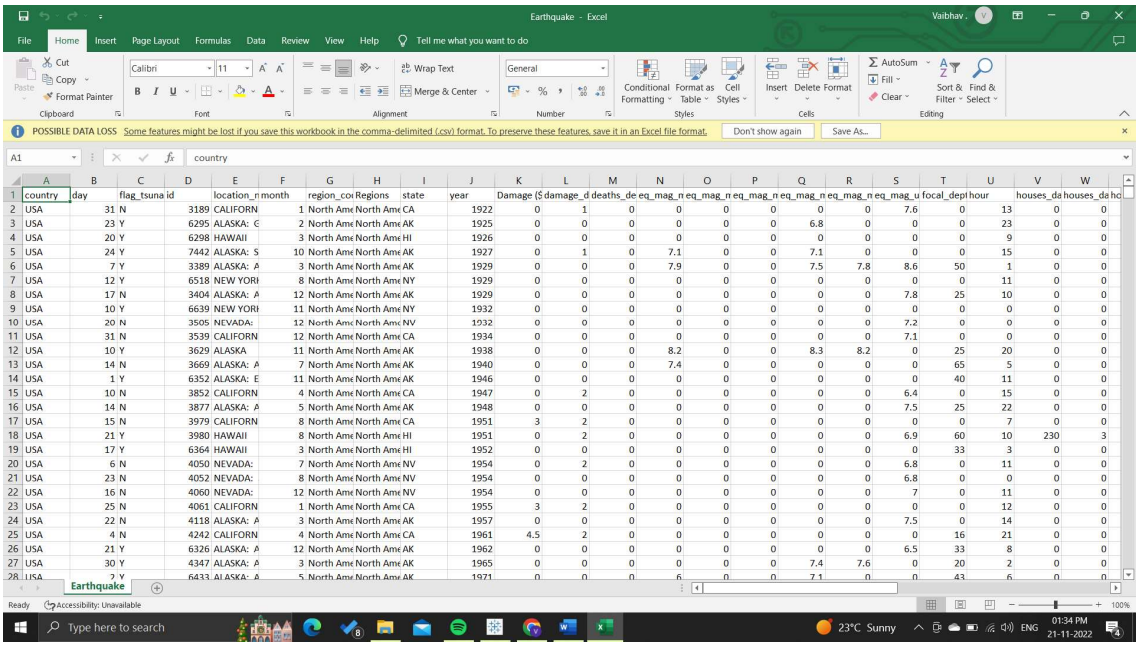
Vaibhav

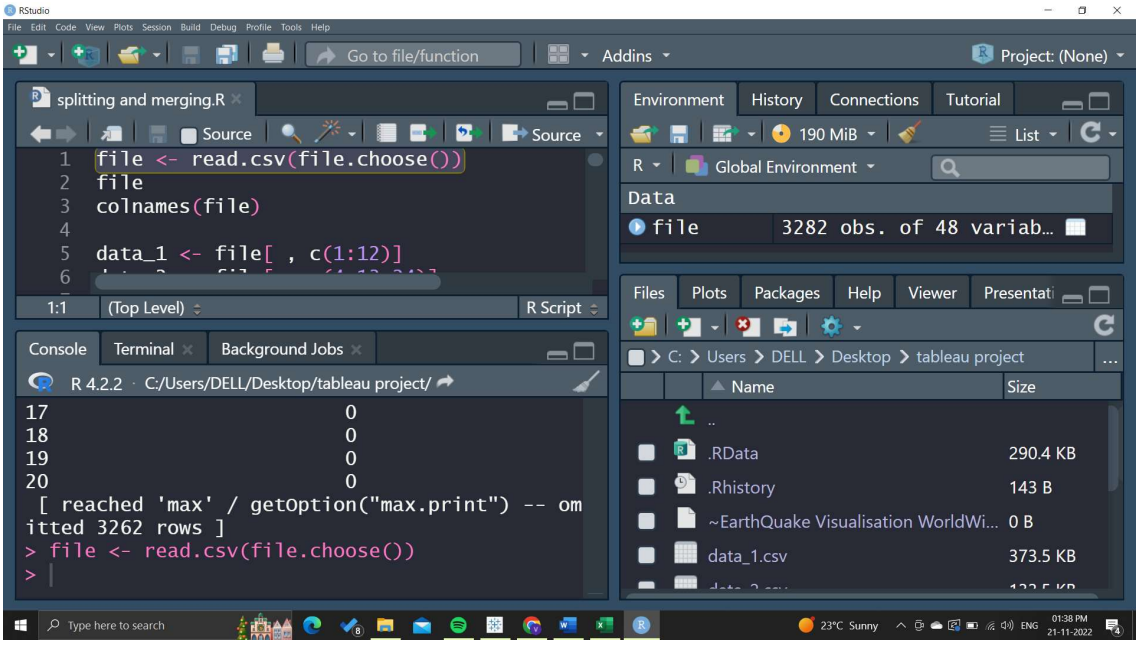
102003711

COE28

Original Dataset



File Import:



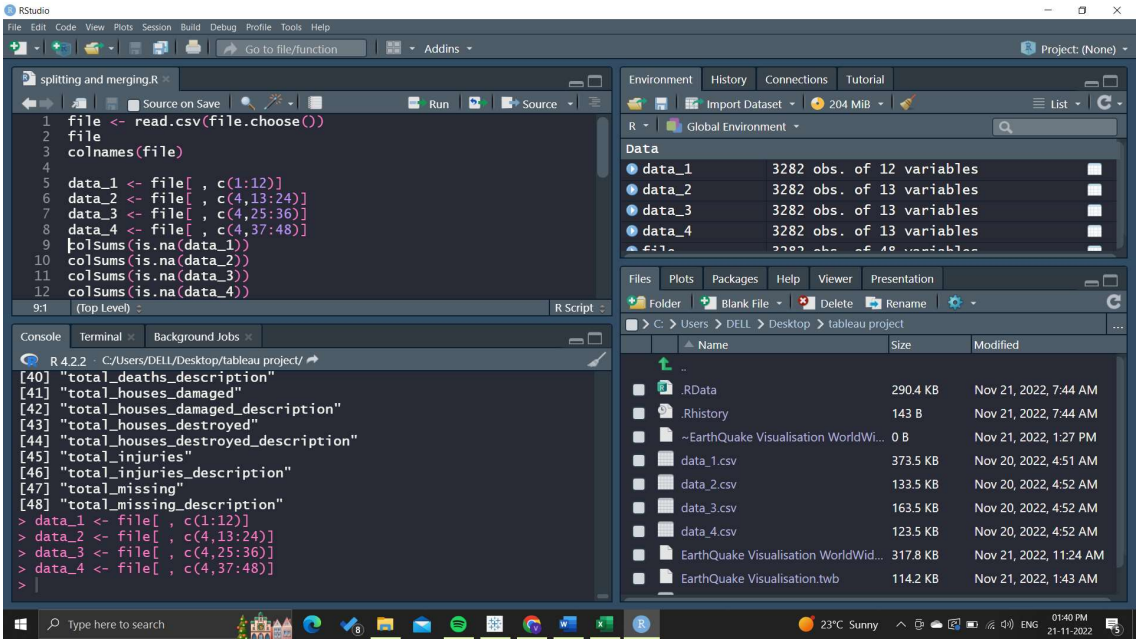
Printing:

```
> file
   country day flag_tsunami   id
1      USA  31            N 3189
2      USA  23            Y 6295
3      USA  20            Y 6298
4      USA  24            Y 7442
5      USA   7            Y 3389
6      USA  12            Y 6518
7      USA  17            N 3404
8      USA  10            Y 6639
9      USA  20            N 3505
10     USA  31            N 3539
11     USA  10            Y 3629
12     USA  14            N 3669
```

Printing Colnames

```
 [ reached 'max' / getOption("max.print") -- omitted 3262 rows ]
> colnames(file)
 [1] "country"
 [2] "day"
 [3] "flag_tsunami"
 [4] "id"
 [5] "location_name"
 [6] "month"
 [7] "region_code"
 [8] "Regions"
 [9] "state"
[10] "year"
[11] "Damage....Millions."
[12] "damage_description"
[13] "deaths_description"
```

Splitting into 4 dataframes:



Checking Null values:

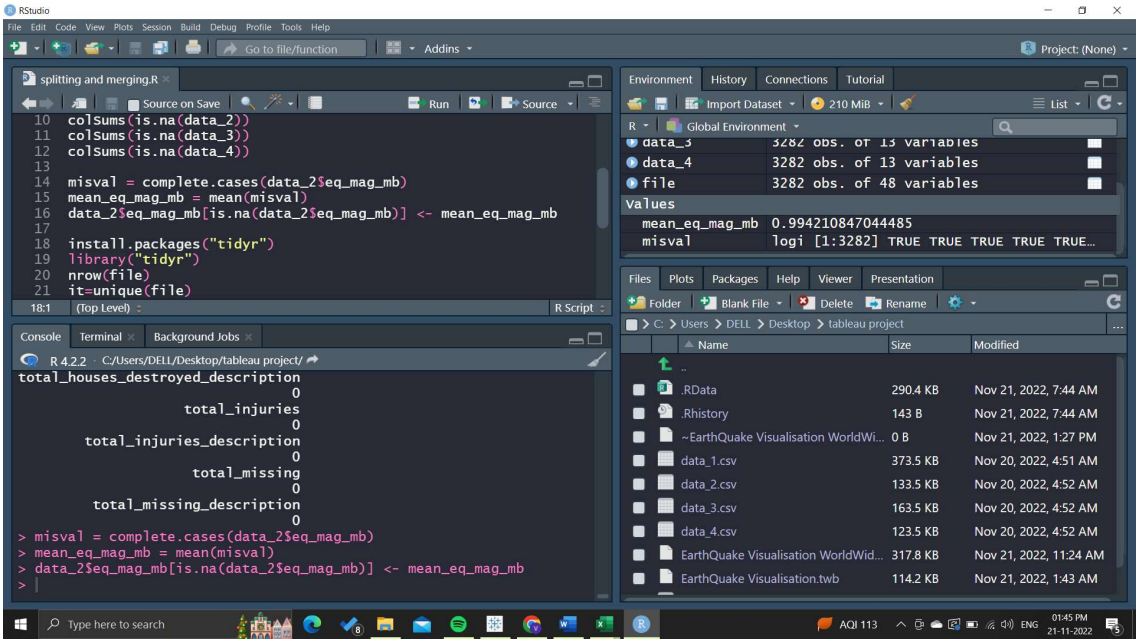
```
> colSums(is.na(data_1))
           country                 day        flag_tsunami
                 0                   0                   0
                id       location_name               month
                 0                   0                   0
       region_code             Regions               state
                 0                   0                   0
              year Damage....Millions.  damage_description
                 0                   0                   0
>
```

```
                 0                   0                   0
> colSums(is.na(data_2))
                id          deaths_description
                 0                           0
          eq_mag_mb                   eq_mag_mfa
                19                           0
          eq_mag_ml                    eq_mag_ms
                 0                           0
          eq_mag_mw                   eq_mag_unk
                 0                           0
        focal_depth                        hour
                 0                           0
     houses_damaged   houses_damaged_description
                 0                           0
```

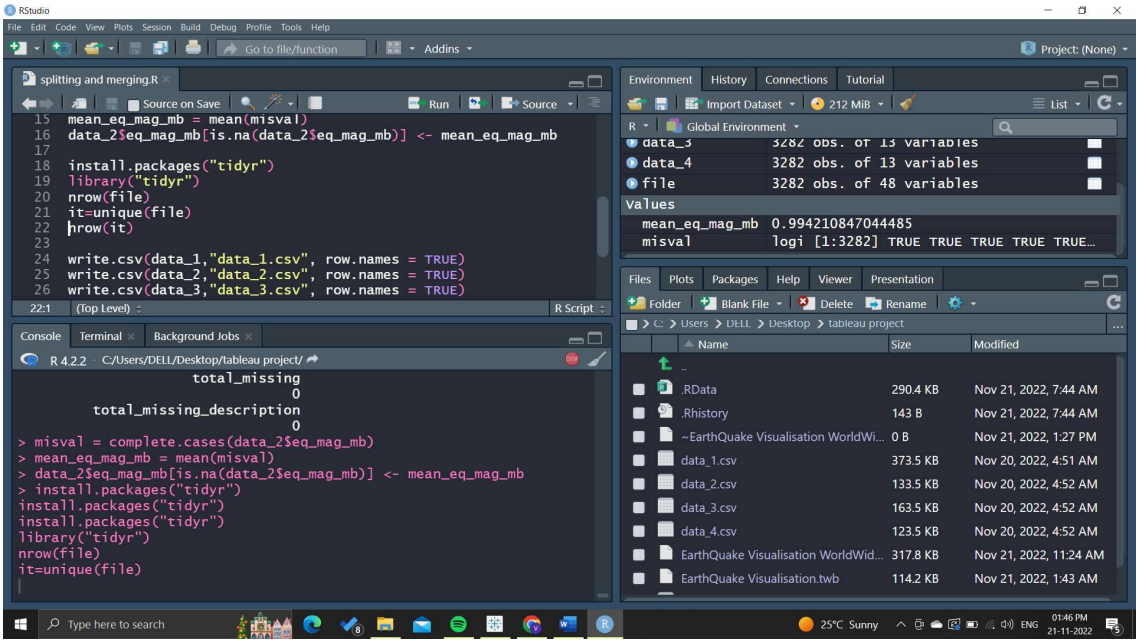
```
> colSums(is.na(data_3))
                        id       injuries_description
                         0                          0
                 Intensity                   latitude
                         0                          0
                 longitude                  Magnitude
                         0                          0
                    minute        missing_description
                         0                          0
          Number.of.deaths Number.of.Houses.Destroyed
                         0                          0
        Number.of.Injuries  Number.of.Missing.Persons
                         0                          0
                    second
```

```
> colSums(is.na(data_4))
                                    id
                                     0
          total_damage_description
                                     0
     total_damage_millions_dollars
                                     0
                        total_deaths
                                     0
          total_deaths_description
                                     0
              total_houses_damaged
                                     0
  total_houses_damaged_description
```

Replacing Null values by mean

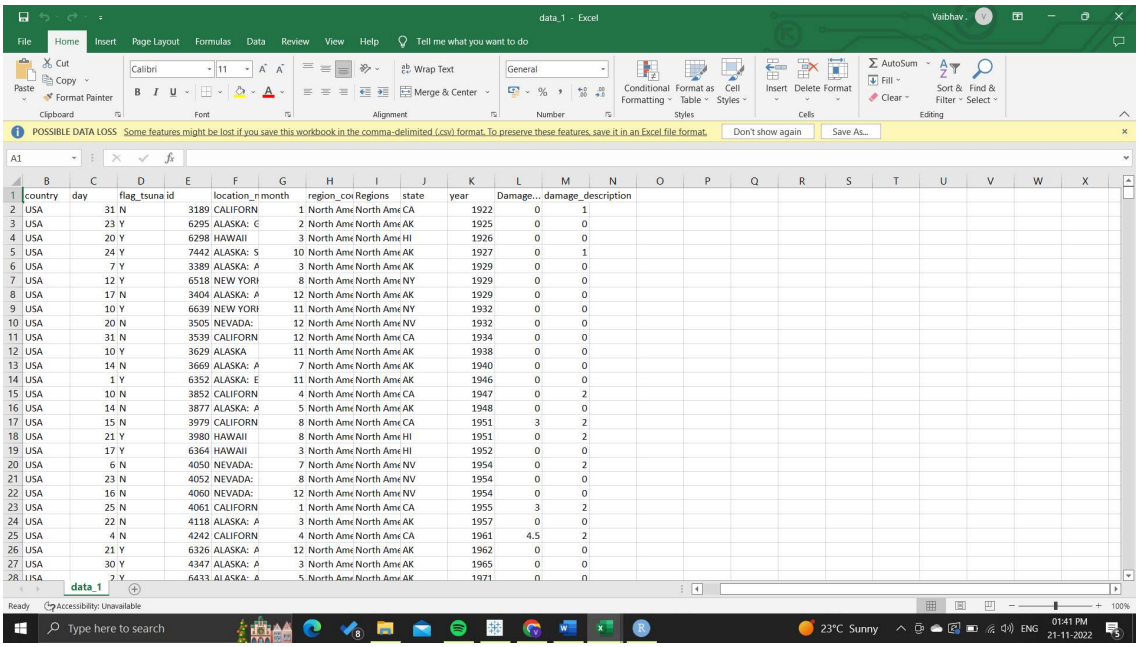


Removing duplicates:

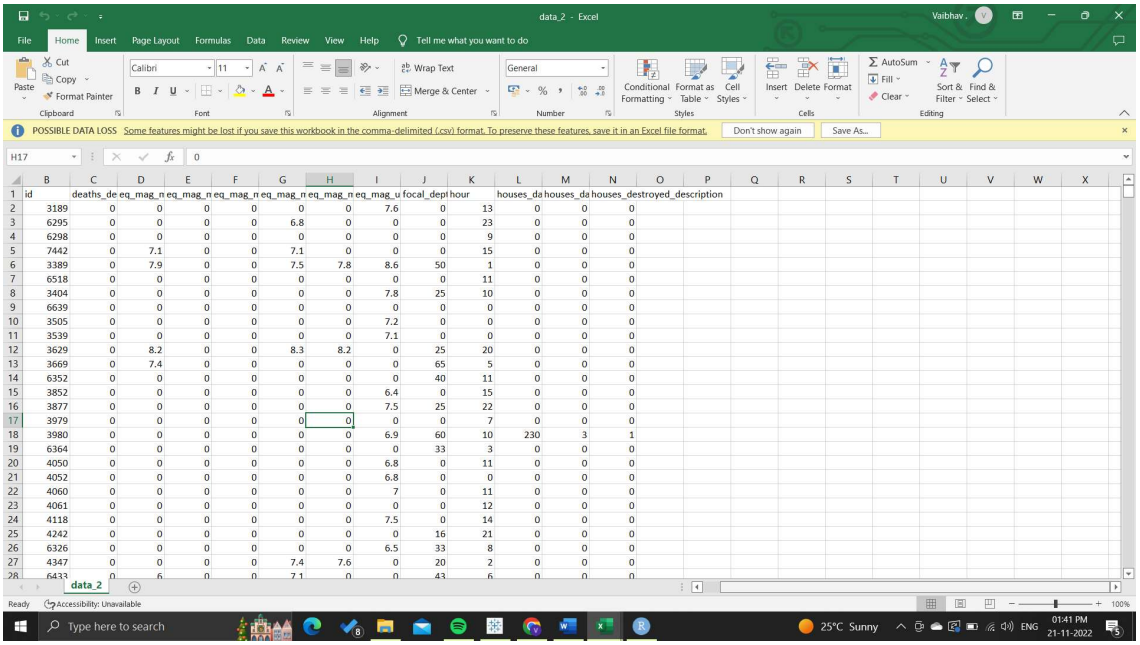


Writing into csv files

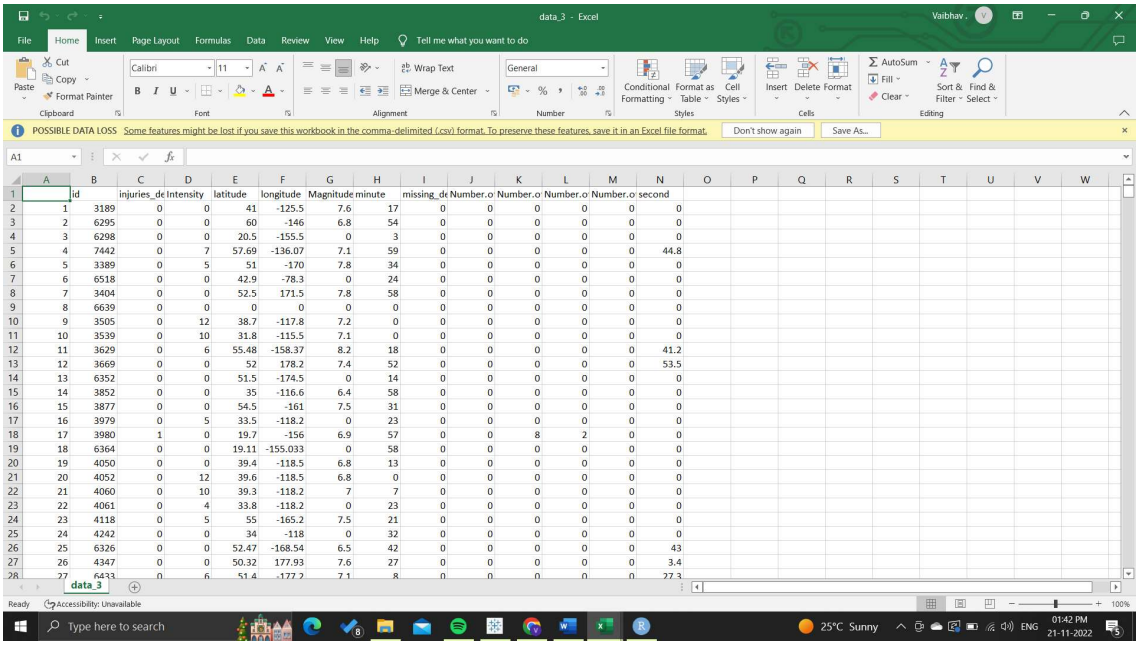
```
nrow(rt)
write.csv(data_1,"data_1.csv", row.names = TRUE)
write.csv(data_2,"data_2.csv", row.names = TRUE)
write.csv(data_3,"data_3.csv", row.names = TRUE)
write.csv(data_4,"data_4.csv", row.names = TRUE)
```



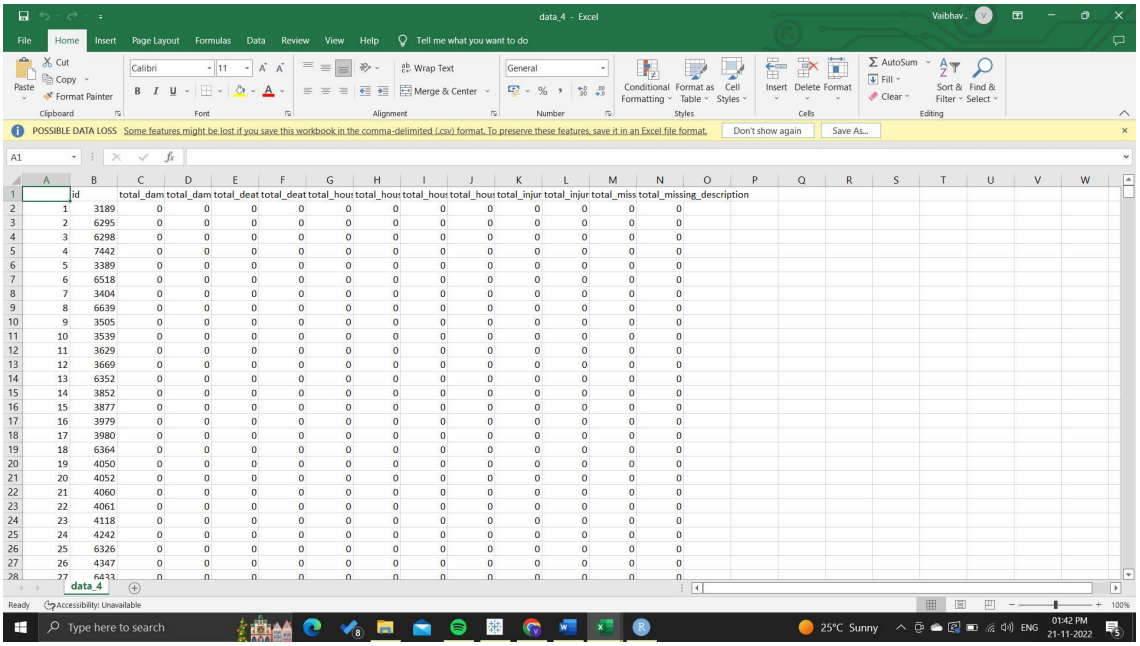
	B	C	D	E	F	G	H	I	J	K	L	M	N
1	country	day	flag_tsuna	id	location_n	month	region_co	Regions	state	year	Damage...	damage_description	
2	USA	31	N	3189	CALIFORN	1	North Ame	North Ame	CA	1922	0	1	
3	USA	23	Y	6295	ALASKA: C	2	North Ame	North Ame	AK	1925	0	0	
4	USA	20	Y	6298	HAWAII	3	North Ame	North Ame	HI	1926	0	0	
5	USA	24	Y	7442	ALASKA: S	10	North Ame	North Ame	AK	1927	0	1	
6	USA	7	Y	3389	ALASKA: A	3	North Ame	North Ame	AK	1929	0	0	
7	USA	12	Y	6518	NEW YORI	8	North Ame	North Ame	NY	1929	0	0	
8	USA	17	N	3404	ALASKA: A	12	North Ame	North Ame	AK	1929	0	0	
9	USA	10	Y	6639	NEW YORI	11	North Ame	North Ame	NY	1932	0	0	
10	USA	20	N	3505	NEVADA:	12	North Ame	North Ame	NV	1932	0	0	
11	USA	31	N	3539	CALIFORN	12	North Ame	North Ame	CA	1934	0	0	
12	USA	10	Y	3629	ALASKA	11	North Ame	North Ame	AK	1938	0	0	
13	USA	14	N	3669	ALASKA: A	7	North Ame	North Ame	AK	1940	0	0	
14	USA	1	Y	6352	ALASKA: E	11	North Ame	North Ame	AK	1946	0	0	
15	USA	10	N	3852	CALIFORN	4	North Ame	North Ame	CA	1947	0	2	
16	USA	14	N	3877	ALASKA: A	5	North Ame	North Ame	AK	1948	0	0	
17	USA	15	N	3979	CALIFORN	8	North Ame	North Ame	CA	1951	3	2	
18	USA	21	Y	3980	HAWAII	8	North Ame	North Ame	HI	1951	0	2	
19	USA	17	Y	6364	HAWAII	3	North Ame	North Ame	HI	1952	0	0	
20	USA	6	N	4050	NEVADA:	7	North Ame	North Ame	NV	1954	0	2	
21	USA	23	N	4052	NEVADA:	8	North Ame	North Ame	NV	1954	0	0	
22	USA	16	N	4060	NEVADA:	12	North Ame	North Ame	NV	1954	0	0	
23	USA	25	N	4061	CALIFORN	1	North Ame	North Ame	CA	1955	3	2	
24	USA	22	N	4118	ALASKA: A	3	North Ame	North Ame	AK	1957	0	0	
25	USA	4	N	4242	CALIFORN	4	North Ame	North Ame	CA	1961	4.5	2	
26	USA	21	Y	6326	ALASKA: A	12	North Ame	North Ame	AK	1962	0	0	
27	USA	30	Y	4347	ALASKA: A	3	North Ame	North Ame	AK	1965	0	0	
28	USA	2	Y	6433	ALASKA: A	5	North Ame	North Ame	AK	1971	0	0	



	B	C	D	E	F	G	H	I	J	K	L	M	N
1	id	deaths_de	eq_mag_n	eq_mag_n	eq_mag_n	eq_mag_n	eq_mag_n	eq_mag_u	focal_dept	hour	houses_da	houses_da	houses_destroyed_description
2	3189	0	0	0	0	0	0	7.6	0	13	0	0	0
3	6295	0	0	0	0	6.8	0	0	0	23	0	0	0
4	6298	0	0	0	0	0	0	0	0	9	0	0	0
5	7442	0	7.1	0	0	7.1	0	0	0	15	0	0	0
6	3389	0	7.9	0	0	7.5	7.8	8.6	50	1	0	0	0
7	6518	0	0	0	0	0	0	0	0	11	0	0	0
8	3404	0	0	0	0	0	0	7.8	25	10	0	0	0
9	6639	0	0	0	0	0	0	0	0	0	0	0	0
10	3505	0	0	0	0	0	0	7.2	0	0	0	0	0
11	3539	0	0	0	0	0	0	7.1	0	0	0	0	0
12	3629	0	8.2	0	0	8.3	8.2	0	25	20	0	0	0
13	3669	0	7.4	0	0	0	0	0	65	5	0	0	0
14	6352	0	0	0	0	0	0	0	40	11	0	0	0
15	3852	0	0	0	0	0	0	6.4	0	15	0	0	0
16	3877	0	0	0	0	0	0	7.5	25	22	0	0	0
17	3979	0	0	0	0	0	0	0	0	7	0	0	0
18	3980	0	0	0	0	0	0	6.9	60	10	230	3	1
19	6364	0	0	0	0	0	0	0	33	3	0	0	0
20	4050	0	0	0	0	0	0	6.8	0	11	0	0	0
21	4052	0	0	0	0	0	0	6.8	0	0	0	0	0
22	4060	0	0	0	0	0	0	7	0	11	0	0	0
23	4061	0	0	0	0	0	0	0	0	12	0	0	0
24	4118	0	0	0	0	0	0	7.5	0	14	0	0	0
25	4242	0	0	0	0	0	0	0	16	21	0	0	0
26	6326	0	0	0	0	0	0	6.5	33	8	0	0	0
27	4347	0	0	0	0	7.4	7.6	0	20	2	0	0	0
28	6433	0	6	0	0	7.1	0	0	43	6	0	0	0



	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1		id	injuries_de	Intensity	latitude	longitude	Magnitude	minute	missing_de	Number.o	Number.o	Number.o	Number.o	second
2	1	3189	0	0	41	-125.5	7.6	17	0	0	0	0	0	0
3	2	6295	0	0	60	-146	6.8	54	0	0	0	0	0	0
4	3	6298	0	0	20.5	-155.5	0	3	0	0	0	0	0	0
5	4	7442	0	7	57.69	-136.07	7.1	59	0	0	0	0	0	44.8
6	5	3389	0	5	51	-170	7.8	34	0	0	0	0	0	0
7	6	6518	0	0	42.9	-78.3	0	24	0	0	0	0	0	0
8	7	3404	0	0	52.5	171.5	7.8	58	0	0	0	0	0	0
9	8	6639	0	0	0	0	0	0	0	0	0	0	0	0
10	9	3505	0	12	38.7	-117.8	7.2	0	0	0	0	0	0	0
11	10	3539	0	10	31.8	-115.5	7.1	0	0	0	0	0	0	0
12	11	3629	0	6	55.48	-158.37	8.2	18	0	0	0	0	0	41.2
13	12	3669	0	0	52	178.2	7.4	52	0	0	0	0	0	53.5
14	13	6352	0	0	51.5	-174.5	0	14	0	0	0	0	0	0
15	14	3852	0	0	35	-116.6	6.4	58	0	0	0	0	0	0
16	15	3877	0	0	54.5	-161	7.5	31	0	0	0	0	0	0
17	16	3979	0	5	33.5	-118.2	0	23	0	0	0	0	0	0
18	17	3980	1	0	19.7	-156	6.9	57	0	0	8	2	0	0
19	18	6364	0	0	19.11	-155.033	0	58	0	0	0	0	0	0
20	19	4050	0	0	39.4	-118.5	6.8	13	0	0	0	0	0	0
21	20	4052	0	12	39.6	-118.5	6.8	0	0	0	0	0	0	0
22	21	4060	0	10	39.3	-118.2	7	7	0	0	0	0	0	0
23	22	4061	0	4	33.8	-118.2	0	23	0	0	0	0	0	0
24	23	4118	0	5	55	-165.2	7.5	21	0	0	0	0	0	0
25	24	4242	0	0	34	-118	0	32	0	0	0	0	0	0
26	25	6326	0	0	52.47	-168.54	6.5	42	0	0	0	0	0	43
27	26	4347	0	0	50.32	177.93	7.6	27	0	0	0	0	0	3.4
28	27	6433	0	6	51.4	-177.2	7.1	8	0	0	0	0	0	27.3



	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1		id	total_dam	total_dam	total_deat	total_deat	total_hous	total_hous	total_hous	total_hous	total_injur	total_injur	total_miss	total_missing_description
2	1	3189	0	0	0	0	0	0	0	0	0	0	0	0
3	2	6295	0	0	0	0	0	0	0	0	0	0	0	0
4	3	6298	0	0	0	0	0	0	0	0	0	0	0	0
5	4	7442	0	0	0	0	0	0	0	0	0	0	0	0
6	5	3389	0	0	0	0	0	0	0	0	0	0	0	0
7	6	6518	0	0	0	0	0	0	0	0	0	0	0	0
8	7	3404	0	0	0	0	0	0	0	0	0	0	0	0
9	8	6639	0	0	0	0	0	0	0	0	0	0	0	0
10	9	3505	0	0	0	0	0	0	0	0	0	0	0	0
11	10	3539	0	0	0	0	0	0	0	0	0	0	0	0
12	11	3629	0	0	0	0	0	0	0	0	0	0	0	0
13	12	3669	0	0	0	0	0	0	0	0	0	0	0	0
14	13	6352	0	0	0	0	0	0	0	0	0	0	0	0
15	14	3852	0	0	0	0	0	0	0	0	0	0	0	0
16	15	3877	0	0	0	0	0	0	0	0	0	0	0	0
17	16	3979	0	0	0	0	0	0	0	0	0	0	0	0
18	17	3980	0	0	0	0	0	0	0	0	0	0	0	0
19	18	6364	0	0	0	0	0	0	0	0	0	0	0	0
20	19	4050	0	0	0	0	0	0	0	0	0	0	0	0
21	20	4052	0	0	0	0	0	0	0	0	0	0	0	0
22	21	4060	0	0	0	0	0	0	0	0	0	0	0	0
23	22	4061	0	0	0	0	0	0	0	0	0	0	0	0
24	23	4118	0	0	0	0	0	0	0	0	0	0	0	0
25	24	4242	0	0	0	0	0	0	0	0	0	0	0	0
26	25	6326	0	0	0	0	0	0	0	0	0	0	0	0
27	26	4347	0	0	0	0	0	0	0	0	0	0	0	0
28	27	6433	0	0	0	0	0	0	0	0	0	0	0	0

Printing csv files

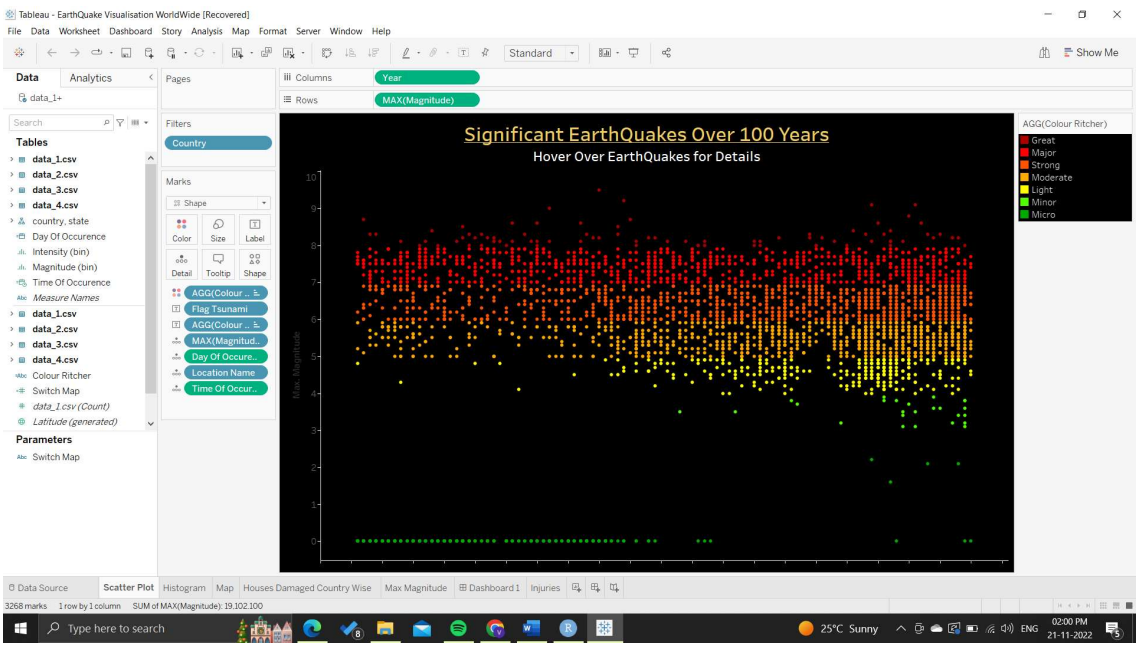
```
> read.csv("data_1.csv")
    X country day flag_tsunami    id
1   1     USA  31            N  3189
2   2     USA  23            Y  6295
3   3     USA  20            Y  6298
4   4     USA  24            Y  7442
5   5     USA   7            Y  3389
6   6     USA  12            Y  6518
7   7     USA  17            N  3404
8   8     USA  10            Y  6639
9   9     USA  20            N  3505
```

```
> read.csv("data_2.csv")
    X    id deaths_description eq_mag_mb eq_mag_mfa eq_mag_ml
1   1  3189                  0 0.0000000          0       0.0
2   2  6295                  0 0.0000000          0       0.0
3   3  6298                  0 0.0000000          0       0.0
4   4  7442                  0 7.1000000          0       0.0
5   5  3389                  0 7.9000000          0       0.0
6   6  6518                  0 0.0000000          0       0.0
7   7  3404                  0 0.0000000          0       0.0
8   8  6639                  0 0.0000000          0       0.0
```

```
> read.csv("data_3.csv")
    X    id injuries_description Intensity latitude longitude
1   1  3189                    0         0   41.000  -125.500
2   2  6295                    0         0   60.000  -146.000
3   3  6298                    0         0   20.500  -155.500
4   4  7442                    0         7   57.690  -136.070
5   5  3389                    0         5   51.000  -170.000
6   6  6518                    0         0   42.900   -78.300
7   7  3404                    0         0   52.500   171.500
8   8  6639                    0         0    0.000     0.000
9   9  3505                    0        12   38.700  -117.800
10 10  3539                    0        10   31.800  -115.500
11 11  3629                    0         6   55.480  -158.370
```

```
> read.csv("data_4.csv")
    X    id total_damage_description
1   1  3189                        0
2   2  6295                        0
3   3  6298                        0
4   4  7442                        0
5   5  3389                        0
6   6  6518                        0
7   7  3404                        0
8   8  6639                        0
9   9  3505                        0
10 10  3539                        0
```

Tableau Sheets:



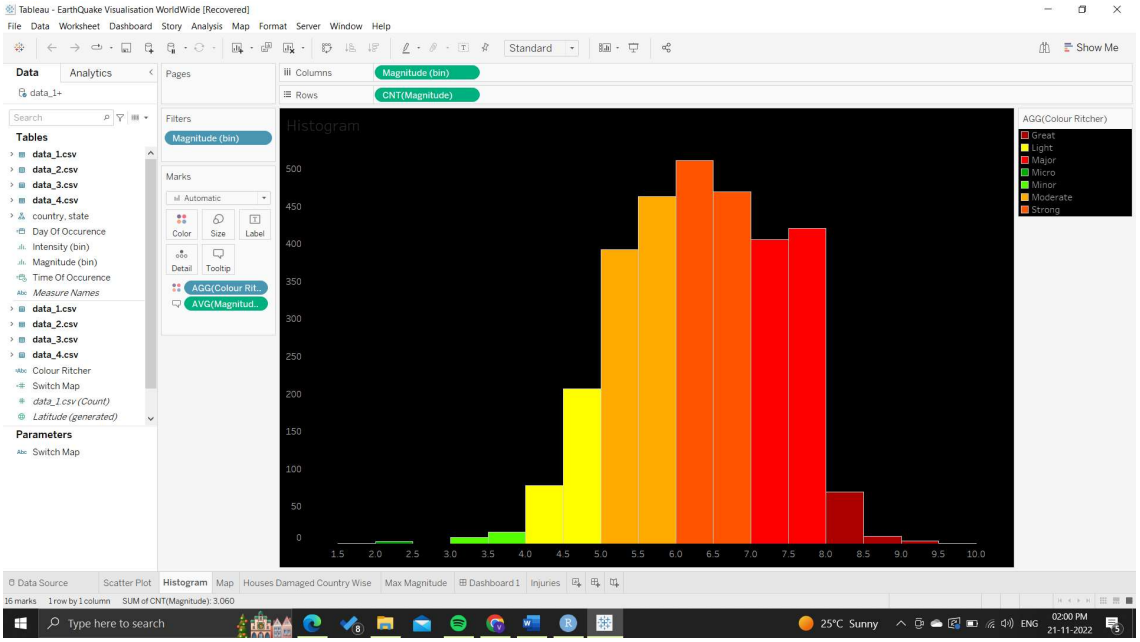


Tableau - EarthQuake Visualisation WorldWide [Recovered]
File Data Worksheet Dashboard Story Analysis Map Format Server Window Help
Data Analytics
Pages
Columns Magnitude (bin)
Rows CNT(Magnitude)
Filters
Magnitude (bin)
Marks
Automatic
Color Size Label
Detail Tooltip
AGG(Colour Rit..
AVG(Magnitud..
Tables
data_1.csv
data_2.csv
data_3.csv
data_4.csv
country, state
Day Of Occurence
Intensity (bin)
Magnitude (bin)
Time Of Occurence
Measure Names
Colour Ritcher
Switch Map
data_1.csv (Count)
Latitude (generated)
Parameters
Switch Map
Histogram
AGG(Colour Ritcher)
Great
Light
Major
Micro
Minor
Moderate
Strong
Data Source Scatter Plot Histogram Map Houses Damaged Country Wise Max Magnitude Dashboard 1 Injuries
16 marks 1 row by 1 column SUM of CNT(Magnitude): 3,060
Type here to search
25°C Sunny
ENG
02:00 PM
21-11-2022

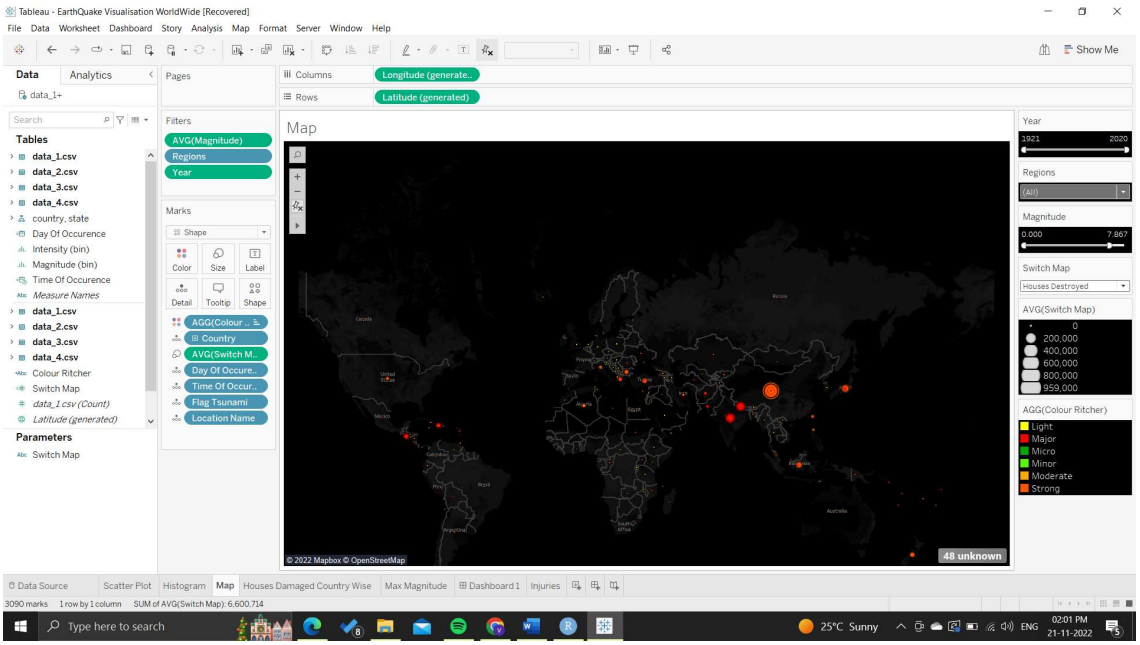


Tableau - EarthQuake Visualisation WorldWide [Recovered]
File Data Worksheet Dashboard Story Analysis Map Format Server Window Help
Data Analytics
Pages
Columns Longitude (generate..
Rows Latitude (generated)
Filters
AVG(Magnitude)
Regions
Year
Marks
Shape
Color Size Label
Detail Tooltip Shape
AGG(Colour ..
Country
AVG(Switch M..
Day Of Occure..
Time Of Occur..
Flag Tsunami
Location Name
Map
© 2022 Mapbox © OpenStreetMap
48 unknown
Year
1921 2020
Regions
(All)
Magnitude
0.000 7.867
Switch Map
Houses Destroyed
AVG(Switch Map)
0
200,000
400,000
600,000
800,000
959,000
AGG(Colour Ritcher)
Light
Major
Micro
Minor
Moderate
Strong
Data Source Scatter Plot Histogram Map Houses Damaged Country Wise Max Magnitude Dashboard 1 Injuries
3090 marks 1 row by 1 column SUM of AVG(Switch Map): 6,600,714
Type here to search
25°C Sunny
ENG
02:01 PM
21-11-2022

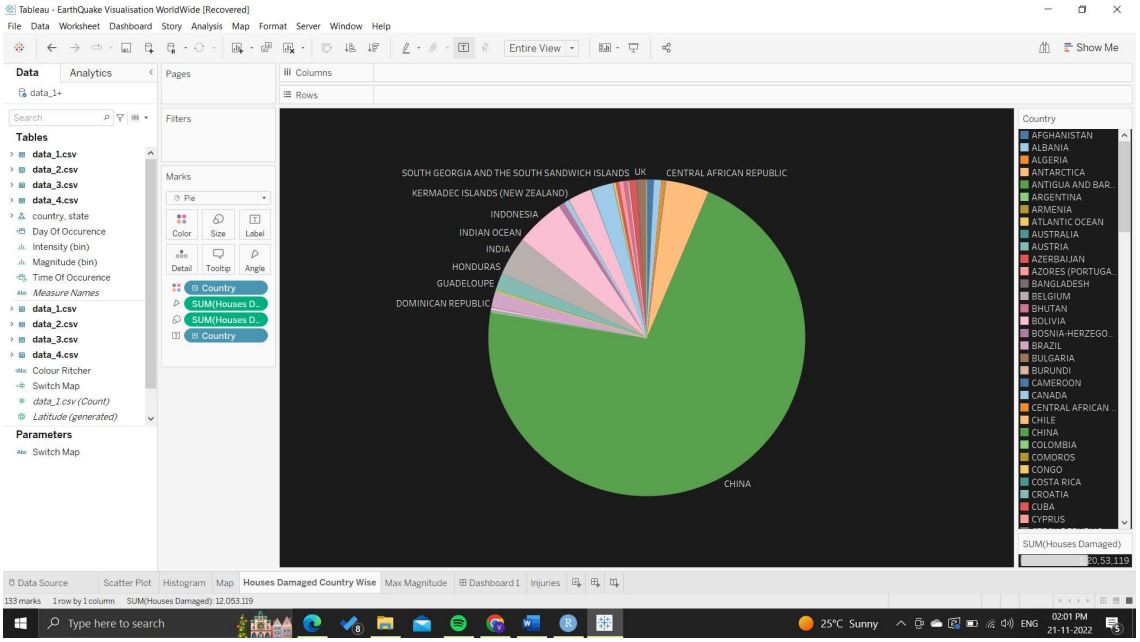


Tableau - EarthQuake Visualisation WorldWide [Recovered]
File Data Worksheet Dashboard Story Analysis Map Format Server Window Help
Entire View
Show Me
Data
Analytics
data_1+
Pages
Columns
Rows
Filters
Marks
Pie
Color
Size
Label
Detail
Tooltip
Angle
Country
SUM(Houses D...
SUM(Houses D...
Country
Tables
data_1.csv
data_2.csv
data_3.csv
data_4.csv
country, state
Day Of Occurence
Intensity (bin)
Magnitude (bin)
Time Of Occurence
Measure Names
data_1.csv
data_2.csv
data_3.csv
data_4.csv
Colour Ritcher
Switch Map
data_1.csv (Count)
Latitude (generated)
Parameters
Switch Map
SOUTH GEORGIA AND THE SOUTH SANDWICH ISLANDS
UK
CENTRAL AFRICAN REPUBLIC
KERMADEC ISLANDS (NEW ZEALAND)
INDONESIA
INDIAN OCEAN
INDIA
HONDURAS
GUADELOUPE
DOMINICAN REPUBLIC
CHINA
Country
AFGHANISTAN
ALBANIA
ALGERIA
ANTARCTICA
ANTIGUA AND BAR...
ARGENTINA
ARMENIA
ATLANTIC OCEAN
AUSTRALIA
AUSTRIA
AZERBAIJAN
AZORES (PORTUGA...
BANGLADESH
BELGIUM
BHUTAN
BOLIVIA
BOSNIA-HERZEGO...
BRAZIL
BULGARIA
BURUNDI
CAMEROON
CANADA
CENTRAL AFRICAN ...
CHILE
CHINA
COLOMBIA
COMOROS
CONGO
COSTA RICA
CROATIA
CUBA
CYPRUS
SUM(Houses Damaged)
20,53,119
Data Source
Scatter Plot
Histogram
Map
Houses Damaged Country Wise
Max Magnitude
Dashboard 1
Injuries
133 marks
1 row by 1 column
SUM(Houses Damaged): 12,053,119
Type here to search
25°C Sunny
ENG
02:01 PM
21-11-2022

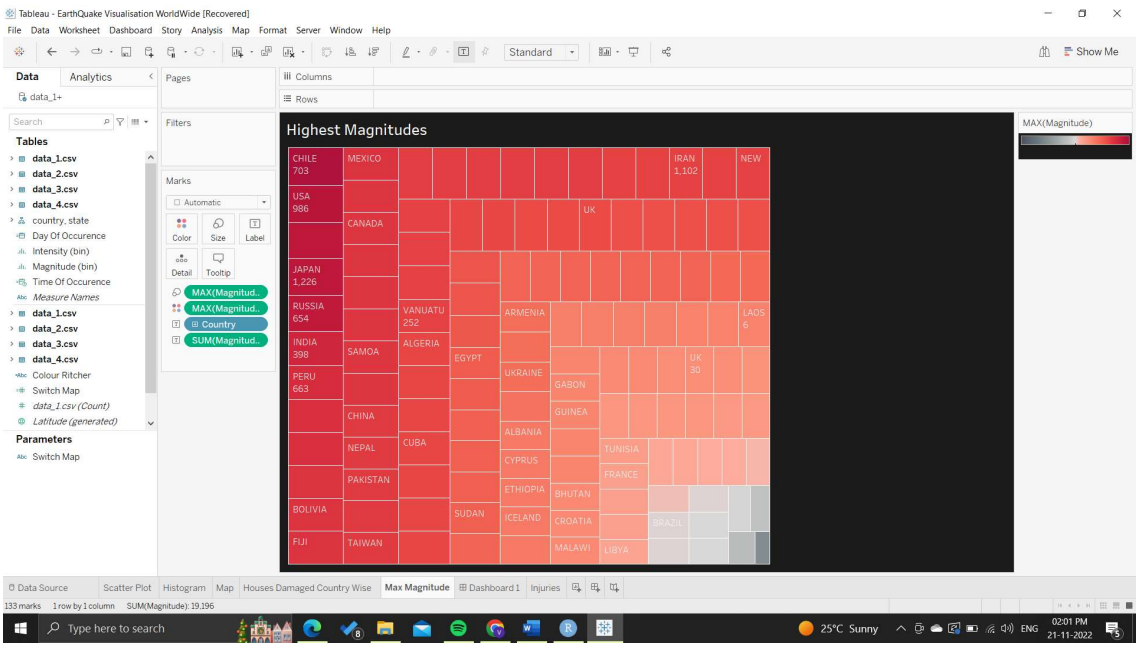
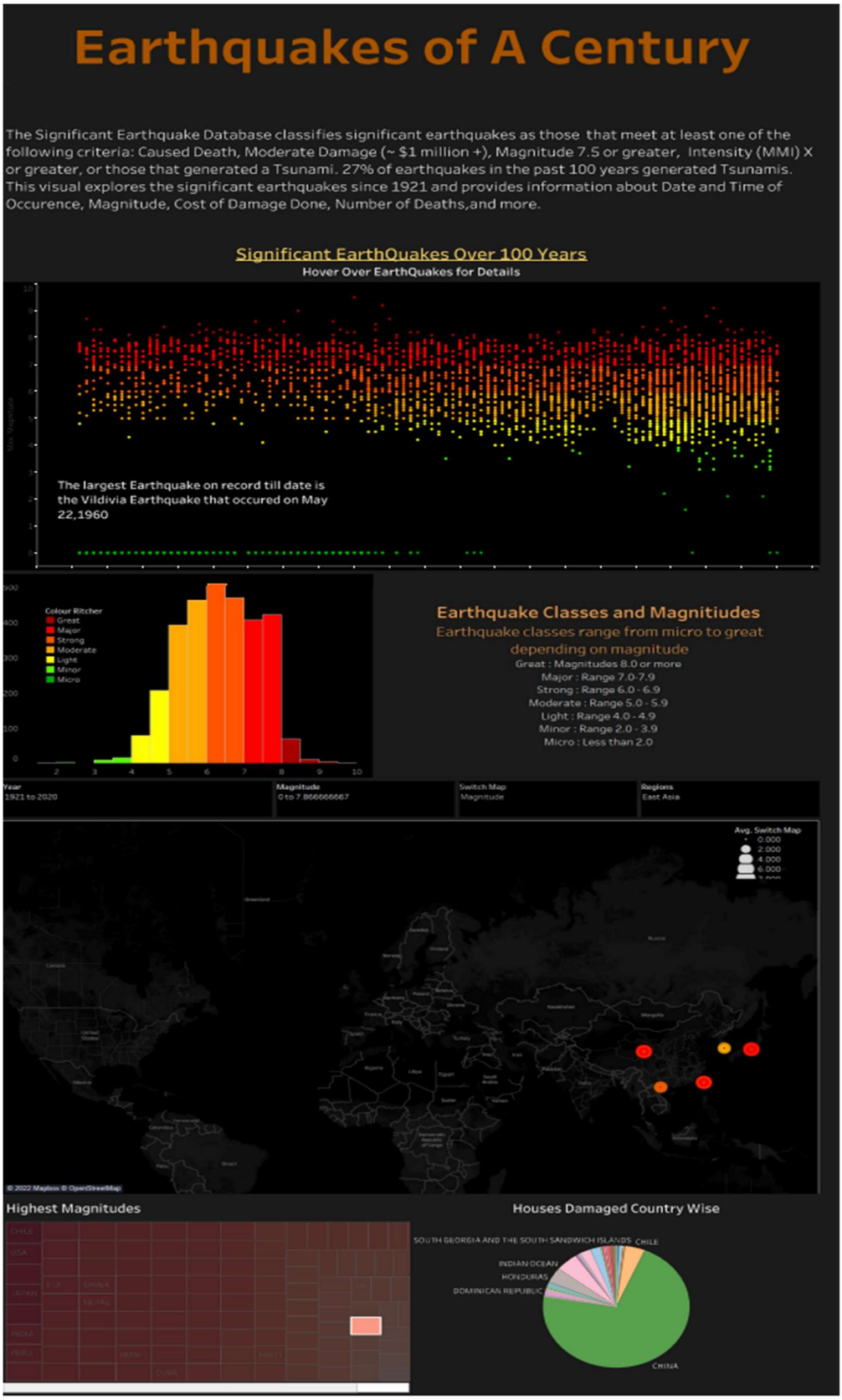


Tableau - EarthQuake Visualisation WorldWide [Recovered]
File Data Worksheet Dashboard Story Analysis Map Format Server Window Help
Standard
Show Me
Data
Analytics
data_1+
Pages
Columns
Rows
Filters
Marks
Automatic
Color
Size
Label
Detail
Tooltip
MAX(Magnitud...
MAX(Magnitud...
Country
SUM(Magnitud...
Tables
data_1.csv
data_2.csv
data_3.csv
data_4.csv
country, state
Day Of Occurence
Intensity (bin)
Magnitude (bin)
Time Of Occurence
Measure Names
data_1.csv
data_2.csv
data_3.csv
data_4.csv
Colour Ritcher
Switch Map
data_1.csv (Count)
Latitude (generated)
Parameters
Switch Map
Highest Magnitudes
CHILE 703
MEXICO
IRAN 1,102
NEW
USA 986
CANADA
UK
JAPAN 1,226
RUSSIA 654
VANUATU 252
ARMENIA
LAOS 6
INDIA 398
ALGERIA
EGYPT
UKRAINE
UK 30
PERU 663
SAMOA
GABON
GUINEA
CHINA
CUBA
ALBANIA
TUNISIA
NEPAL
CYPRUS
FRANCE
PAKISTAN
ETHIOPIA
BHUTAN
BOLIVIA
ICELAND
CROATIA
SUDAN
BRAZIL
FIJI
TAIWAN
MALAWI
LIBYA
MAX(Magnitude)
Data Source
Scatter Plot
Histogram
Map
Houses Damaged Country Wise
Max Magnitude
Dashboard 1
Injuries
133 marks
1 row by 1 column
SUM(Magnitude): 19,196
Type here to search
25°C Sunny
ENG
02:01 PM
21-11-2022

Dashboard:


Earthquakes of A Century
The Significant Earthquake Database classifies significant earthquakes as those that meet at least one of the following criteria: Caused Death, Moderate Damage (~ $1 million +), Magnitude 7.5 or greater, Intensity (MMI) X or greater, or those that generated a Tsunami. 27% of earthquakes in the past 100 years generated Tsunamis. This visual explores the significant earthquakes since 1921 and provides information about Date and Time of Occurence, Magnitude, Cost of Damage Done, Number of Deaths,and more.
Significant EarthQuakes Over 100 Years
Hover Over EarthQuakes for Details
The largest Earthquake on record till date is the Vildivia Earthquake that occured on May 22,1960
Colour Ritcher
Great
Major
Strong
Moderate
Light
Minor
Micro
Earthquake Classes and Magnitiudes
Earthquake classes range from micro to great depending on magnitude
Great : Magnitudes 8.0 or more
Major : Range 7.0-7.9
Strong : Range 6.0 - 6.9
Moderate : Range 5.0 - 5.9
Light : Range 4.0 - 4.9
Minor : Range 2.0 - 3.9
Micro : Less than 2.0
Year
1921 to 2020
Magnitude
0 to 7.866666667
Switch Map
Magnitude
Regions
East Asia
Avg. Switch Map
Highest Magnitudes
Houses Damaged Country Wise
SOUTH GEORGIA AND THE SOUTH SANDWICH ISLANDS
CHILE
INDIAN OCEAN
HONDURAS
DOMINICAN REPUBLIC
CHINA