Package 'Fatality Analysis Reporting System'

LKH

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This FARS package summarises the various variables on the annual highway traffic accident data and anayizes which months and which state is most frequently occured vehicle traffic crashes after then ultimately reports on the map by state and year intuitively. Each function's result could be consisted in a reporting dashboard.

- Read
- Summarise
- Draw on the map

Read a CSV file inculding FARS information

Description The `fars_read(filename)` function is for reading a CSV file into R. The FARS file includes that the US National Highway Traffic Safety Administration's Fatality Analysis Reporting System, which is a nationwide census providing the American public yearly data regarding fatal injuries suffered in motor vehicle traffic crashes.

`Examples:`

```
`fars_read("../extdata/accident_2013.csv")`
```

This is a result table: just shown 8 columns dut to screen size

STATE	ST_CASE	VE_TOTAL	VE_FORMS	PVH_INVL	PEDS	PERNOTMVIT	PERMVIT
1	10001	1	1	0	0	0	8
1	10002	2	2	0	0	0	2
1	10003	1	1	0	0	0	1
1	10004	1	1	0	0	0	3
1	10005	2	2	0	0	0	3
1	10006	2	2	0	0	0	3
1	10007	1	1	0	0	0	1
1	10008	2	2	0	0	0	2
1	10009	1	1	0	0	0	1
1	10010	2	2	0	0	0	4

Write file name attaching desired year

The `make_filename(year)` function is using `sprintf` function which use C-style string formatting commands to wrap a character vector containing a formatted combination of text and variable values. The result file name will be changed as `accident_input(year).csv.bz2`.

Function Call Example as follows:

```
`make_filename(2013)`
`make_filename("2013")`
```

This is a result file name: [1] "accident_2013.csv.bz2"

Read a specific year file and Select MONTH, year columns of it.

Read a desired year's pre-named file that was made by `make_filename(year)` function and Select only MONTH, year two columns matching year value in the tbl with the your input year value. If you input unexist year, it will be error due to there is no file to import

Examples:

`fars_read_years(2013)`

This is a result only 10 rows :

MONTH	year
1	2013
1	2013
1	2013
1	2013
1	2013
1	2013
1	2013
1	2013
1	2013
1	2013

Sum count by month of the year

`fars_summarize_year(years)` function reads a desired years pre-named file by using `fars_read_years` function and group by year, MONTH. And then summarize counting by month of the year by `dplyr summarize` function.

Examples:

`fars_summarize_years(2013)`

This is a result

MONTH	2013
1	2230
2	1952
3	2356
4	2300
5	2532
6	2692
7	2660
8	2899
9	2741
10	2768
11	2615
12	2457

Map a specific state's accidents in a specific year selected

`fars_map_state(state.num, year)` function draws the state's accidents as a point. You should send two parameters on the map. Two arguemnts are state.num and year. This function uses the previous 4 functions mendtioned above for plotting a specific state accident map.

```
Param:
```

```
    `state.num` A non-negative interger specifying the desired state
    `year`      A non-negative interger specifying the desired year.
```

```
Examples:
```

```
  `fars_map_state(1, 2013)`
```