

Playground

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10/21/2017

Playground

```
require(gtrendsR)

## Loading required package: gtrendsR

require(ggplot2)

## Loading required package: ggplot2

require(dplyr)

## Loading required package: dplyr

##
## Attaching package: 'dplyr'

## The following objects are masked from 'package:stats':
##
##   filter, lag

## The following objects are masked from 'package:base':
##
##   intersect, setdiff, setequal, union
```

Making Dataframes

This gives us a master dataframe of search frequencies of “depression” over the past 12 months in the US which relate for sure to mental health. We can take different dataframes using “\$”: see the dataframe for details.

```
trend<-gtrends("depression",c("US"),time="today 12-m",category=437)
trend
```

```
## $interest_over_time
##           date hits keyword geo gprop category
## 1 2016-10-23   76 depression US  web      437
## 2 2016-10-30   83 depression US  web      437
## 3 2016-11-06   67 depression US  web      437
## 4 2016-11-13   70 depression US  web      437
## 5 2016-11-20   59 depression US  web      437
## 6 2016-11-27   75 depression US  web      437
## 7 2016-12-04   80 depression US  web      437
## 8 2016-12-11   73 depression US  web      437
## 9 2016-12-18   62 depression US  web      437
## 10 2016-12-25   68 depression US  web      437
## 11 2017-01-01   69 depression US  web      437
## 12 2017-01-08   73 depression US  web      437
## 13 2017-01-15   75 depression US  web      437
```

```

## 14 2017-01-22 85 depression US web 437
## 15 2017-01-29 73 depression US web 437
## 16 2017-02-05 70 depression US web 437
## 17 2017-02-12 66 depression US web 437
## 18 2017-02-19 68 depression US web 437
## 19 2017-02-26 68 depression US web 437
## 20 2017-03-05 73 depression US web 437
## 21 2017-03-12 72 depression US web 437
## 22 2017-03-19 73 depression US web 437
## 23 2017-03-26 74 depression US web 437
## 24 2017-04-02 74 depression US web 437
## 25 2017-04-09 74 depression US web 437
## 26 2017-04-16 78 depression US web 437
## 27 2017-04-23 78 depression US web 437
## 28 2017-04-30 73 depression US web 437
## 29 2017-05-07 77 depression US web 437
## 30 2017-05-14 74 depression US web 437
## 31 2017-05-21 75 depression US web 437
## 32 2017-05-28 66 depression US web 437
## 33 2017-06-04 64 depression US web 437
## 34 2017-06-11 64 depression US web 437
## 35 2017-06-18 62 depression US web 437
## 36 2017-06-25 62 depression US web 437
## 37 2017-07-02 64 depression US web 437
## 38 2017-07-09 63 depression US web 437
## 39 2017-07-16 65 depression US web 437
## 40 2017-07-23 68 depression US web 437
## 41 2017-07-30 63 depression US web 437
## 42 2017-08-06 67 depression US web 437
## 43 2017-08-13 61 depression US web 437
## 44 2017-08-20 100 depression US web 437
## 45 2017-08-27 73 depression US web 437
## 46 2017-09-03 60 depression US web 437
## 47 2017-09-10 67 depression US web 437
## 48 2017-09-17 72 depression US web 437
## 49 2017-09-24 71 depression US web 437
## 50 2017-10-01 70 depression US web 437
## 51 2017-10-08 82 depression US web 437
##
## $interest_by_region
##      location hits      keyword geo gprop
## 1      West Virginia 100 depression US  web
## 2      North Dakota  97 depression US  web
## 3           Utah    94 depression US  web
## 4      Vermont      92 depression US  web
## 5          Maine     92 depression US  web
## 6      Kentucky     91 depression US  web
## 7          Idaho     90 depression US  web
## 8      Indiana      89 depression US  web
## 9      Pennsylvania  88 depression US  web
## 10     Michigan     88 depression US  web
## 11         Iowa     86 depression US  web
## 12     New Hampshire  86 depression US  web
## 13         Montana   86 depression US  web

```

## 14	South Dakota	86	depression	US	web
## 15	New Mexico	86	depression	US	web
## 16	Connecticut	86	depression	US	web
## 17	Rhode Island	85	depression	US	web
## 18	Minnesota	85	depression	US	web
## 19	Alaska	85	depression	US	web
## 20	Massachusetts	84	depression	US	web
## 21	Ohio	84	depression	US	web
## 22	Oklahoma	84	depression	US	web
## 23	Wisconsin	83	depression	US	web
## 24	Delaware	82	depression	US	web
## 25	Arkansas	82	depression	US	web
## 26	Oregon	82	depression	US	web
## 27	Maryland	82	depression	US	web
## 28	Missouri	81	depression	US	web
## 29	Washington	81	depression	US	web
## 30	Louisiana	80	depression	US	web
## 31	Illinois	80	depression	US	web
## 32	Nebraska	79	depression	US	web
## 33	Alabama	79	depression	US	web
## 34	Tennessee	79	depression	US	web
## 35	Virginia	79	depression	US	web
## 36	Kansas	78	depression	US	web
## 37	Wyoming	78	depression	US	web
## 38	Colorado	78	depression	US	web
## 39	Mississippi	77	depression	US	web
## 40	South Carolina	77	depression	US	web
## 41	North Carolina	77	depression	US	web
## 42	Arizona	76	depression	US	web
## 43	New Jersey	76	depression	US	web
## 44	California	75	depression	US	web
## 45	New York	73	depression	US	web
## 46	Hawaii	72	depression	US	web
## 47	Texas	72	depression	US	web
## 48	Georgia	72	depression	US	web
## 49	District of Columbia	69	depression	US	web
## 50	Nevada	69	depression	US	web
## 51	Florida	68	depression	US	web
##					
##	\$interest_by_dma				
##				location	hits
## 1				North Platte NE	100
## 2				Bluefield-Beckley-Oak Hill WV	95
## 3				Clarksburg-Weston WV	93
## 4				Wheeling WV-Steubenville OH	88
## 5				Eureka CA	88
## 6				Erie PA	87
## 7				Sherman TX-Ada OK	84
## 8				Lansing MI	84
## 9				Harrisonburg VA	83
## 10				Alpena MI	83
## 11				Great Falls MT	82
## 12				Binghamton NY	82
## 13				Idaho Falls-Pocatello ID	82

## 14	Fargo-Valley City ND	81
## 15	Rockford IL	81
## 16	Helena MT	80
## 17	Flint-Saginaw-Bay City MI	80
## 18	Quincy IL-Hannibal MO-Keokuk IA	80
## 19	Butte-Bozeman MT	80
## 20	Elmira NY	80
## 21	Charleston-Huntington WV	80
## 22	Duluth MN-Superior WI	80
## 23	Ottumwa IA-Kirksville MO	79
## 24	Topeka KS	79
## 25	Watertown NY	79
## 26	Bangor ME	79
## 27	Peoria-Bloomington IL	79
## 28	Burlington VT-Plattsburgh NY	78
## 29	Johnstown-Altoona PA	78
## 30	Wilkes Barre-Scranton PA	78
## 31	Springfield-Holyoke MA	78
## 32	Utica NY	78
## 33	Jonesboro AR	78
## 34	Juneau AK	78
## 35	Charlottesville VA	78
## 36	Marquette MI	78
## 37	Davenport IA-Rock Island-Moline IL	78
## 38	St. Joseph MO	77
## 39	Youngstown OH	77
## 40	Casper-Riverton WY	77
## 41	Salt Lake City UT	76
## 42	Lexington KY	76
## 43	Lafayette IN	76
## 44	Paducah KY-Cape Girardeau MO-Harrisburg-Mount Vernon IL	76
## 45	Little Rock-Pine Bluff AR	76
## 46	La Crosse-Eau Claire WI	76
## 47	Cedar Rapids-Waterloo-Iowa City & Dubuque IA	76
## 48	Richmond-Petersburg VA	76
## 49	Grand Rapids-Kalamazoo-Battle Creek MI	75
## 50	Sioux Falls(Mitchell) SD	75
## 51	Monterey-Salinas CA	75
## 52	Louisville KY	75
## 53	Pittsburgh PA	75
## 54	Toledo OH	75
## 55	Terre Haute IN	75
## 56	Harrisburg-Lancaster-Lebanon-York PA	75
## 57	Zanesville OH	75
## 58	Jackson TN	75
## 59	South Bend-Elkhart IN	74
## 60	Ft. Wayne IN	74
## 61	Indianapolis IN	74
## 62	Syracuse NY	74
## 63	Amarillo TX	74
## 64	Hartford & New Haven CT	74
## 65	Albany-Schenectady-Troy NY	73
## 66	Columbia-Jefferson City MO	73
## 67	Eugene OR	73

## 68	Lincoln & Hastings-Kearney NE	73
## 69	Minneapolis-St. Paul MN	73
## 70	Joplin MO-Pittsburg KS	73
## 71	Parkersburg WV	73
## 72	Minot-Bismarck-Dickinson(Williston) ND	73
## 73	Madison WI	73
## 74	Evansville IN	73
## 75	Tri-Cities TN-VA	73
## 76	Lafayette LA	72
## 77	Presque Isle ME	72
## 78	Billings, MT	72
## 79	Oklahoma City OK	72
## 80	Gainesville FL	72
## 81	Champaign & Springfield-Decatur IL	72
## 82	Kansas City MO	72
## 83	Shreveport LA	72
## 84	Traverse City-Cadillac MI	71
## 85	Tallahassee FL-Thomasville GA	71
## 86	Albuquerque-Santa Fe NM	71
## 87	Portland-Auburn ME	71
## 88	Wichita-Hutchinson KS	71
## 89	Lake Charles LA	71
## 90	Chico-Redding CA	71
## 91	Roanoke-Lynchburg VA	71
## 92	Tucson (Sierra Vista) AZ	71
## 93	Cleveland-Akron (Canton) OH	70
## 94	Yakima-Pasco-Richland-Kennewick WA	70
## 95	Spokane WA	70
## 96	Jackson MS	70
## 97	Providence RI-New Bedford MA	70
## 98	Colorado Springs-Pueblo CO	70
## 99	San Angelo TX	70
## 100	Lima OH	70
## 101	Huntsville-Decatur (Florence) AL	70
## 102	Buffalo NY	70
## 103	Monroe LA-El Dorado AR	70
## 104	Anchorage AK	69
## 105	Fresno-Visalia CA	69
## 106	Missoula MT	69
## 107	Lubbock TX	69
## 108	Springfield MO	69
## 109	Rochester NY	69
## 110	Mankato MN	69
## 111	Columbus OH	69
## 112	Detroit MI	69
## 113	Medford-Klamath Falls OR	69
## 114	Rochester MN-Mason City IA-Austin MN	69
## 115	Philadelphia PA	69
## 116	Waco-Temple-Bryan TX	68
## 117	Boston MA-Manchester NH	68
## 118	Sioux City IA	68
## 119	Portland OR	68
## 120	Baltimore MD	68
## 121	Wausau-Rhineland WI	68

## 122	Norfolk-Portsmouth-Newport News VA	68
## 123	Alexandria LA	68
## 124	Rapid City SD	68
## 125	Des Moines-Ames IA	68
## 126	Greenville-Spartanburg SC-Asheville NC-Anderson SC	68
## 127	Baton Rouge LA	68
## 128	Palm Springs CA	67
## 129	Cincinnati OH	67
## 130	Bakersfield CA	67
## 131	Boise ID	66
## 132	Seattle-Tacoma WA	66
## 133	Chicago IL	66
## 134	Charleston SC	66
## 135	Greensboro-High Point-Winston Salem NC	66
## 136	Milwaukee WI	66
## 137	Nashville TN	66
## 138	Albany GA	66
## 139	Dothan AL	65
## 140	Hattiesburg-Laurel MS	65
## 141	St. Louis MO	65
## 142	Knoxville TN	65
## 143	Abilene-Sweetwater TX	65
## 144	Dayton OH	65
## 145	San Antonio TX	65
## 146	Victoria TX	65
## 147	Columbus-Tupelo-West Point MS	65
## 148	Greenville-New Bern-Washington NC	65
## 149	Columbus GA	65
## 150	Green Bay-Appleton WI	65
## 151	Ft. Smith-Fayetteville-Springdale-Rogers AR	65
## 152	Chattanooga TN	65
## 153	Phoenix AZ	64
## 154	Columbia SC	64
## 155	Raleigh-Durham (Fayetteville) NC	64
## 156	Los Angeles CA	64
## 157	Denver CO	64
## 158	New Orleans LA	63
## 159	Bowling Green KY	63
## 160	Montgomery (Selma) AL	63
## 161	Augusta GA	63
## 162	Omaha NE	63
## 163	Birmingham AL	63
## 164	El Paso TX	63
## 165	Laredo TX	62
## 166	Bend OR	62
## 167	Tulsa OK	62
## 168	Grand Junction-Montrose CO	61
## 169	Wichita Falls TX & Lawton OK	61
## 170	Santa Barbara-Santa Maria-San Luis Obispo CA	61
## 171	San Diego CA	61
## 172	Mobile AL-Pensacola (Ft. Walton Beach) FL	61
## 173	Yuma AZ-El Centro CA	61
## 174	Honolulu HI	61
## 175	Corpus Christi TX	60

## 176	Jacksonville	FL	60
## 177	Greenwood-Greenville	MS	60
## 178	Savannah	GA	60
## 179	Austin	TX	60
## 180	Washington DC (Hagerstown MD)		60
## 181	Panama City	FL	60
## 182	Reno	NV	60
## 183	Atlanta	GA	59
## 184	Sacramento-Stockton-Modesto	CA	59
## 185	Twin Falls	ID	59
## 186	Tyler-Longview(Lufkin & Nacogdoches)	TX	59
## 187	Charlotte	NC	59
## 188	Salisbury	MD	59
## 189	Tampa-St. Petersburg (Sarasota)	FL	59
## 190	New York	NY	59
## 191	San Francisco-Oakland-San Jose	CA	58
## 192	West Palm Beach-Ft. Pierce	FL	58
## 193	Memphis	TN	58
## 194	Macon	GA	57
## 195	Wilmington	NC	57
## 196	Florence-Myrtle Beach	SC	56
## 197	Cheyenne WY-Scottsbluff	NE	56
## 198	Biloxi-Gulfport	MS	56
## 199	Houston	TX	56
## 200	Fairbanks	AK	55
## 201	Orlando-Daytona Beach-Melbourne	FL	55
## 202	Ft. Myers-Naples	FL	55
## 203	Dallas-Ft. Worth	TX	55
## 204	Las Vegas	NV	55
## 205	Harlingen-Weslaco-Brownsville-McAllen	TX	54
## 206	Beaumont-Port Arthur	TX	53
## 207	Odessa-Midland	TX	52
## 208	Miami-Ft. Lauderdale	FL	48
## 209	Meridian	MS	45
##	keyword	geo	gprop
## 1	depression	US	web
## 2	depression	US	web
## 3	depression	US	web
## 4	depression	US	web
## 5	depression	US	web
## 6	depression	US	web
## 7	depression	US	web
## 8	depression	US	web
## 9	depression	US	web
## 10	depression	US	web
## 11	depression	US	web
## 12	depression	US	web
## 13	depression	US	web
## 14	depression	US	web
## 15	depression	US	web
## 16	depression	US	web
## 17	depression	US	web
## 18	depression	US	web
## 19	depression	US	web

##	20	depression	US	web
##	21	depression	US	web
##	22	depression	US	web
##	23	depression	US	web
##	24	depression	US	web
##	25	depression	US	web
##	26	depression	US	web
##	27	depression	US	web
##	28	depression	US	web
##	29	depression	US	web
##	30	depression	US	web
##	31	depression	US	web
##	32	depression	US	web
##	33	depression	US	web
##	34	depression	US	web
##	35	depression	US	web
##	36	depression	US	web
##	37	depression	US	web
##	38	depression	US	web
##	39	depression	US	web
##	40	depression	US	web
##	41	depression	US	web
##	42	depression	US	web
##	43	depression	US	web
##	44	depression	US	web
##	45	depression	US	web
##	46	depression	US	web
##	47	depression	US	web
##	48	depression	US	web
##	49	depression	US	web
##	50	depression	US	web
##	51	depression	US	web
##	52	depression	US	web
##	53	depression	US	web
##	54	depression	US	web
##	55	depression	US	web
##	56	depression	US	web
##	57	depression	US	web
##	58	depression	US	web
##	59	depression	US	web
##	60	depression	US	web
##	61	depression	US	web
##	62	depression	US	web
##	63	depression	US	web
##	64	depression	US	web
##	65	depression	US	web
##	66	depression	US	web
##	67	depression	US	web
##	68	depression	US	web
##	69	depression	US	web
##	70	depression	US	web
##	71	depression	US	web
##	72	depression	US	web
##	73	depression	US	web

##	74	depression	US	web
##	75	depression	US	web
##	76	depression	US	web
##	77	depression	US	web
##	78	depression	US	web
##	79	depression	US	web
##	80	depression	US	web
##	81	depression	US	web
##	82	depression	US	web
##	83	depression	US	web
##	84	depression	US	web
##	85	depression	US	web
##	86	depression	US	web
##	87	depression	US	web
##	88	depression	US	web
##	89	depression	US	web
##	90	depression	US	web
##	91	depression	US	web
##	92	depression	US	web
##	93	depression	US	web
##	94	depression	US	web
##	95	depression	US	web
##	96	depression	US	web
##	97	depression	US	web
##	98	depression	US	web
##	99	depression	US	web
##	100	depression	US	web
##	101	depression	US	web
##	102	depression	US	web
##	103	depression	US	web
##	104	depression	US	web
##	105	depression	US	web
##	106	depression	US	web
##	107	depression	US	web
##	108	depression	US	web
##	109	depression	US	web
##	110	depression	US	web
##	111	depression	US	web
##	112	depression	US	web
##	113	depression	US	web
##	114	depression	US	web
##	115	depression	US	web
##	116	depression	US	web
##	117	depression	US	web
##	118	depression	US	web
##	119	depression	US	web
##	120	depression	US	web
##	121	depression	US	web
##	122	depression	US	web
##	123	depression	US	web
##	124	depression	US	web
##	125	depression	US	web
##	126	depression	US	web
##	127	depression	US	web

##	128	depression	US	web
##	129	depression	US	web
##	130	depression	US	web
##	131	depression	US	web
##	132	depression	US	web
##	133	depression	US	web
##	134	depression	US	web
##	135	depression	US	web
##	136	depression	US	web
##	137	depression	US	web
##	138	depression	US	web
##	139	depression	US	web
##	140	depression	US	web
##	141	depression	US	web
##	142	depression	US	web
##	143	depression	US	web
##	144	depression	US	web
##	145	depression	US	web
##	146	depression	US	web
##	147	depression	US	web
##	148	depression	US	web
##	149	depression	US	web
##	150	depression	US	web
##	151	depression	US	web
##	152	depression	US	web
##	153	depression	US	web
##	154	depression	US	web
##	155	depression	US	web
##	156	depression	US	web
##	157	depression	US	web
##	158	depression	US	web
##	159	depression	US	web
##	160	depression	US	web
##	161	depression	US	web
##	162	depression	US	web
##	163	depression	US	web
##	164	depression	US	web
##	165	depression	US	web
##	166	depression	US	web
##	167	depression	US	web
##	168	depression	US	web
##	169	depression	US	web
##	170	depression	US	web
##	171	depression	US	web
##	172	depression	US	web
##	173	depression	US	web
##	174	depression	US	web
##	175	depression	US	web
##	176	depression	US	web
##	177	depression	US	web
##	178	depression	US	web
##	179	depression	US	web
##	180	depression	US	web
##	181	depression	US	web

```

## 182 depression US web
## 183 depression US web
## 184 depression US web
## 185 depression US web
## 186 depression US web
## 187 depression US web
## 188 depression US web
## 189 depression US web
## 190 depression US web
## 191 depression US web
## 192 depression US web
## 193 depression US web
## 194 depression US web
## 195 depression US web
## 196 depression US web
## 197 depression US web
## 198 depression US web
## 199 depression US web
## 200 depression US web
## 201 depression US web
## 202 depression US web
## 203 depression US web
## 204 depression US web
## 205 depression US web
## 206 depression US web
## 207 depression US web
## 208 depression US web
## 209 depression US web
##
## $interest_by_city
##      location hits keyword geo gprop
## 1      Ann Arbor 100 depression US web
## 2      Madison 99 depression US web
## 3      Louisville 98 depression US web
## 4      Albuquerque 94 depression US web
## 5      Portland 94 depression US web
## 6      Virginia Beach 91 depression US web
## 7      Pittsburgh 91 depression US web
## 8      Columbus 90 depression US web
## 9      Philadelphia 89 depression US web
## 10     Minneapolis 89 depression US web
## 11     Baltimore 88 depression US web
## 12     Tucson 88 depression US web
## 13     Indianapolis 87 depression US web
## 14     Boston 86 depression US web
## 15     Kansas City 85 depression US web
## 16     Nashville 84 depression US web
## 17     St. Louis 84 depression US web
## 18     Seattle 83 depression US web
## 19     Omaha 82 depression US web
## 20     Phoenix 82 depression US web
## 21     Fort Worth 82 depression US web
## 22     San Antonio 82 depression US web
## 23     Sacramento 82 depression US web

```

```

## 24    Los Angeles    81 depression US    web
## 25      Detroit    81 depression US    web
## 26      Chicago    81 depression US    web
## 27      Denver    80 depression US    web
## 28    San Diego    80 depression US    web
## 29   Jacksonville    80 depression US    web
## 30    Cincinnati    80 depression US    web
## 31      Raleigh    79 depression US    web
## 32 Oklahoma City    79 depression US    web
## 33      Austin    79 depression US    web
## 34      Dallas    77 depression US    web
## 35    Washington    75 depression US    web
## 36    New York    75 depression US    web
## 37    Atlanta    75 depression US    web
## 38    San Jose    74 depression US    web
## 39      Tampa    72 depression US    web
## 40    Orlando    70 depression US    web
## 41 San Francisco    70 depression US    web
## 42    Charlotte    69 depression US    web
## 43    Houston    68 depression US    web
## 44      Miami    59 depression US    web
##
## $related_topics
## NULL
##
## $related_queries
## NULL
##
## attr(,"class")
## [1] "gtrends" "list"

```

For example, this gives us search frequencies by cities in the U.S.

```

cities_dep<-gtrends("depression",c("US"),time="today 12-m",category=437)$interest_by_city
cities_dep

```

```

##      location hits    keyword geo gprop
## 1    Ann Arbor  100 depression US    web
## 2     Madison   99 depression US    web
## 3   Louisville  98 depression US    web
## 4 Albuquerque  94 depression US    web
## 5    Portland   94 depression US    web
## 6 Virginia Beach 91 depression US    web
## 7   Pittsburgh  91 depression US    web
## 8    Columbus  90 depression US    web
## 9 Philadelphia  89 depression US    web
## 10 Minneapolis  89 depression US    web
## 11   Baltimore  88 depression US    web
## 12    Tucson   88 depression US    web
## 13 Indianapolis  87 depression US    web
## 14    Boston   86 depression US    web
## 15 Kansas City  85 depression US    web
## 16   Nashville  84 depression US    web
## 17    St. Louis  84 depression US    web
## 18    Seattle  83 depression US    web

```

## 19	Omaha	82	depression	US	web
## 20	Phoenix	82	depression	US	web
## 21	Fort Worth	82	depression	US	web
## 22	San Antonio	82	depression	US	web
## 23	Sacramento	82	depression	US	web
## 24	Los Angeles	81	depression	US	web
## 25	Detroit	81	depression	US	web
## 26	Chicago	81	depression	US	web
## 27	Denver	80	depression	US	web
## 28	San Diego	80	depression	US	web
## 29	Jacksonville	80	depression	US	web
## 30	Cincinnati	80	depression	US	web
## 31	Raleigh	79	depression	US	web
## 32	Oklahoma City	79	depression	US	web
## 33	Austin	79	depression	US	web
## 34	Dallas	77	depression	US	web
## 35	Washington	75	depression	US	web
## 36	New York	75	depression	US	web
## 37	Atlanta	75	depression	US	web
## 38	San Jose	74	depression	US	web
## 39	Tampa	72	depression	US	web
## 40	Orlando	70	depression	US	web
## 41	San Francisco	70	depression	US	web
## 42	Charlotte	69	depression	US	web
## 43	Houston	68	depression	US	web
## 44	Miami	59	depression	US	web

This plots cities_dep.

```
ggplot(cities_dep,aes(x=reorder(location,hits),y=hits))+geom_bar(stat="identity")+theme(axis.text.x = e
```

