

# Performing Table Joins

## QGIS Tutorials and Tips



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Translations by

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000000 00 00 000000 **shapefile** 00 000000 000000 00000. 00 00000 0000 00 00000000  
 00 0000 0000 00 00 000000 0000 0000 00000. 0 0000 0000 00 `Table Join` 00 0000 00 0  
 000000 **QGIS** 00 0000 0000 0000 000000.



US Census Bureau shapefile.



- CSVファイルは、テキスト形式で保存されたデータファイル。拡張子は **.csv** である。
- QGISは、CSVファイルを読み込んで、地図上に表示することができる。



US Census Bureau MAF/TIGER shapefile

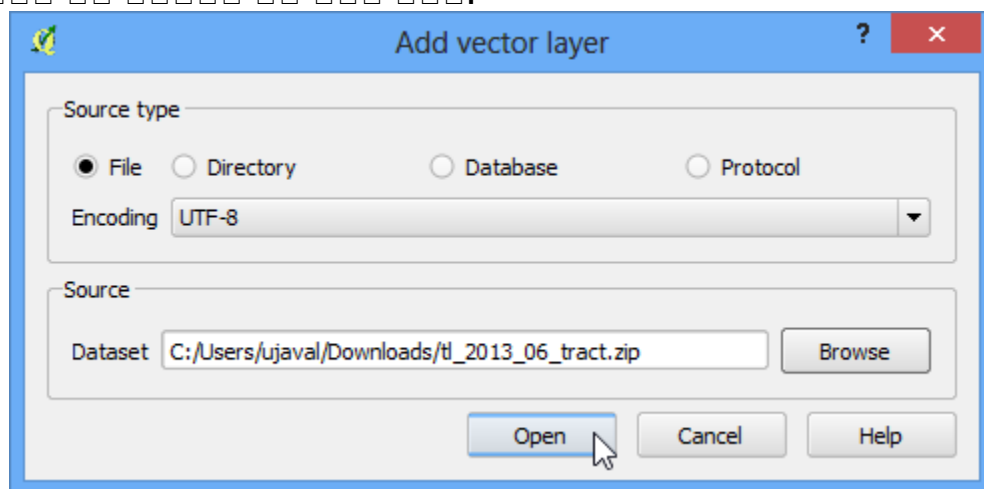
Americal FactFinder  
 <<http://factfinder2.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t>>`\_□  
 □□□ □□ □□ □□□ □□□□□. `Advanced Search` □ □□ □ □□ □□□ CSV □ □□ □□□□ □□  
 □□ `Topic – Total Population` □ `Geographies – All Census Tracts in California` □ □□□ □  
 □□□□. □ □□□□□ `Total Population 2010 Census Summary File 1` □ □□□□□.

□□□ □□ [TIGER] [USCENSUS]

1. `shapefile` `-->` `:menuselection: Layer --> Add Vector Layer``.



2. 파일을 불러와서 `tl\_2013\_06\_tract.zip`을 QGIS에 불러옵니다. QGIS에 불러온 후, 레이어를 추가합니다.



3. `tl\_2013\_06\_tract.shp` 파일을 불러와서 :guilabel: `OK` 버튼을 클릭합니다.





6. □□ shapefile□ □□□ □□□□□□. □ shapefile□ □□□□ □□□□ □□□□ □ □□□ □□□□ □□□□ □□□□□□. □ □□□□ **\*\*GEOID\*\***□□□□ □ □□□□ □□□□□□ □□ ID□ □□□□ □□ □□ □□□□ □ shapefile□ '□□' □ □ □□□□.

Attribute table - tl\_2013\_06\_tract :: Features total: 8057, filtered: 8057, selected: 0

	STATEFP	COUNTYFP	TRACTCE	GEOID	NAME	NAMELSAD	MTFCC
0	06	001	442700	06001442700	4427	Census Tract 44...	G5020
1	06	001	442800	06001442800	4428	Census Tract 44...	G5020
2	06	037	204920	06037204920	2049.20	Census Tract 20...	G5020
3	06	037	205110	06037205110	2051.10	Census Tract 20...	G5020
4	06	037	205120	06037205120	2051.20	Census Tract 20...	G5020
5	06	037	206010	06037206010	2060.10	Census Tract 20...	G5020
6	06	037	206020	06037206020	2060.20	Census Tract 20...	G5020
7	06	037	206050	06037206050	2060.50	Census Tract 20...	G5020
8	06	037	207400	06037207400	2074	Census Tract 20...	G5020
9	06	001	442900	06001442900	4429	Census Tract 44...	G5020
10	06	037	192410	06037192410	1924.10	Census Tract 19...	G5020
11	06	037	192510	06037192510	1925.10	Census Tract 19...	G5020
12	06	037	192520	06037192520	1925.20	Census Tract 19...	G5020
13	06	037	192610	06037192610	1926.10	Census Tract 19...	G5020
14	06	037	192700	06037192700	1927	Census Tract 19...	G5020
15	06	037	194500	06037194500	1945	Census Tract 19...	G5020
16	06	037	195100	06037195100	1951	Census Tract 19...	G5020
17	06	037	195300	06037195300	1953	Census Tract 19...	G5020
18	06	001	443001	06001443001	4430.01	Census Tract 44...	G5020
19	06	001	443002	06001443002	4430.02	Census Tract 44...	G5020
20	06	001	443102	06001443102	4431.02	Census Tract 44...	G5020
21	06	001	443301	06001443301	4433.01	Census Tract 44...	G5020

Show All Features

7. Load the **ca\_tracts\_pop.csv** CSV file. The file contains population data for each census tract in California. The file has a header row with the following columns: **GEO.id2**, **POP00**, **POP00\_000**, **POP00\_000\_000**, **POP00\_000\_000\_000**. The first row of data is: **\*\*D001** 000 000 000 000 000 000.

ca\_tracts\_pop.csv - Notepad

File Edit Format View Help

POPGRP.id,POPGRP.display-label,GEO.id,GEO.id2,GEO.display-label,D001

001,Total population,1400000US06001400100,06001400100,"Census Tract 4001, Alameda County, California",2937

001,Total population,1400000US06001400200,06001400200,"Census Tract 4002, Alameda County, California",1974

001,Total population,1400000US06001400300,06001400300,"Census Tract 4003, Alameda County, California",4865

001,Total population,1400000US06001400400,06001400400,"Census Tract 4004, Alameda County, California",3703

001,Total population,1400000US06001400500,06001400500,"Census Tract 4005, Alameda County, California",3517

001,Total population,1400000US06001400600,06001400600,"Census Tract 4006, Alameda County, California",1571

001,Total population,1400000US06001400700,06001400700,"Census Tract 4007, Alameda County, California",4206

001,Total population,1400000US06001400800,06001400800,"Census Tract 4008, Alameda County, California",3594

001,Total population,1400000US06001400900,06001400900,"Census Tract 4009, Alameda County, California",2302

001,Total population,1400000US06001401000,06001401000,"Census Tract 4010, Alameda County, California",5678

001,Total population,1400000US06001401100,06001401100,"Census Tract 4011, Alameda County, California",4156

001,Total population,1400000US06001401200,06001401200,"Census Tract 4012, Alameda County, California",2416

001,Total population,1400000US06001401300,06001401300,"Census Tract 4013, Alameda County, California",3528

001,Total population,1400000US06001401400,06001401400,"Census Tract 4014, Alameda County, California",4314

001,Total population,1400000US06001401500,06001401500,"Census Tract 4015, Alameda County, California",2630

001,Total population,1400000US06001401600,06001401600,"Census Tract 4016, Alameda County, California",2163

001,Total population,1400000US06001401700,06001401700,"Census Tract 4017, Alameda County, California",2667

001,Total population,1400000US06001401800,06001401800,"Census Tract 4018, Alameda County, California",1703

001,Total population,1400000US06001402200,06001402200,"Census Tract 4022, Alameda County, California",2385

001,Total population,1400000US06001402400,06001402400,"Census Tract 4024, Alameda County, California",2351

001,Total population,1400000US06001402500,06001402500,"Census Tract 4025, Alameda County, California",1784

001,Total population,1400000US06001402600,06001402600,"Census Tract 4026, Alameda County, California",1151

001,Total population,1400000US06001402700,06001402700,"Census Tract 4027, Alameda County, California",1569

001,Total population,1400000US06001402800,06001402800,"Census Tract 4028, Alameda County, California",3345

001,Total population,1400000US06001402900,06001402900,"Census Tract 4029, Alameda County, California",1434

001,Total population,1400000US06001403000,06001403000,"Census Tract 4030, Alameda County, California",2788

001,Total population,1400000US06001403100,06001403100,"Census Tract 4031, Alameda County, California",2238

Ln 1, Col 1

8. `00 0000 0000 csv000 00000 00 00000 0000. 000 0 00 00 000 String`  
`(text)000 000. 0000 0000 00 D001'0000 0000 000000. 0000 00000 0000 0`  
`0000 0000 0000 0000 0000 0000. QG/S000 0000 0000 000000'.csvt'00 0000 00`  
`'00'0000 0000 0000. 0 0000 0 0000 0000 0000 0000 0000 0 00 0000. 0000 '.csv`  
`0000 00 00 00000 '\ca_tracts_pop.csvt'\0 000000. 00 :download:'download the`  
`csvt file from here. <../static/performing_table_joins/data/ca_tracts_pop.csvt>'00`  
`00000 0 0 00000.`



9. In QGIS, open the CSV file and load it into the project. Then, go to the Layer menu and select 'Add Delimited Text Layer'.





10. CSV file format. File format: CSV (comma separated values). No geometry (attribute only table). OK.

**Create a Layer from a Delimited Text File**

File Name:

Layer name:  Encoding:

File format: ☒ CSV (comma separated values) ☐ Custom delimiters ☐ Regular expression delimiter

Record options: Number of header lines to discard:  ☒ First record has field names

Field options: ☐ Trim fields ☐ Discard empty fields ☐ Decimal separator is comma

Geometry definition: ☐ Point coordinates ☐ Well known text (WKT) ☒ No geometry (attribute only table)

Layer settings: ☐ Use spatial index ☐ Use subset index ☐ Watch file

	POPGROUP.id	POPGROUP.display-label	GEO.id	GEO.id2	GEO.display-label
1	001	Total population	1400000US06001400100	06001400100	Census Tract 4001, Alameda County
2	001	Total population	1400000US06001400200	06001400200	Census Tract 4002, Alameda County
3	001	Total population	1400000US06001400300	06001400300	Census Tract 4003, Alameda County
4	001	Total population	1400000US06001400400	06001400400	Census Tract 4004, Alameda County
5	001	Total population	1400000US06001400500	06001400500	Census Tract 4005, Alameda County

11. CSV ☐ ☐ QGIS ☐ ☐ ☐ ☐ ☐.



12. Select the ***tl\_2013\_06\_tract*** layer. Right-click on it and select Properties.



13. □□□ □□ Layer Properties □□□□□□ □□ Joins □□ □□□□□. □□□ □□ □□□□□ □□□ □□□□ + □□□ □□□□□.



14. Add vector join Join layer` `ca\_tracts\_pop`  
 shapefile CSV id  
 :guilabel:`Join field` :guilabel:`Target field` `GEO.id2` `GEOID`  
 :guilabel:`OK`



15. Layer Properties QGIS CSV shapefile  
 `tl\_2013\_06\_tract`  
 :guilabel:`Open Attribute Table`



16. □□ ca\_tracts\_pop\_D001 □□□ □ □□□ □□□ □□□ □ □ □□□□. □□ CSV□□□□□ □ □□□ □□□□ □□□□□. □□ □□□□ □□ QGIS□ □□□□□.

Attribute table - tl\_2013\_06\_tract :: Features total: 8057, filtered: 8057, selected: 0

	INTPTLAT	INTPTLON	tracts_pop_POPGRC	op_POPGROURdi	tracts_pop_GEC	pop_GEQdis	ca_tracts_pop_D001
0	+37.5371514	-122.0081094	001	Total population	1400000US06...	Census Tra...	2873
1	+37.5293619	-121.9931002	001	Total population	1400000US06...	Census Tra...	2816
2	+34.0175004	-118.1974975	001	Total population	1400000US06...	Census Tra...	2598
3	+34.0245059	-118.2142985	001	Total population	1400000US06...	Census Tra...	3766
4	+34.0187546	-118.2117956	001	Total population	1400000US06...	Census Tra...	3618
5	+34.0682177	-118.2320356	001	Total population	1400000US06...	Census Tra...	3127
6	+34.0571230	-118.2311021	001	Total population	1400000US06...	Census Tra...	7883
7	+34.0299036	-118.2244531	001	Total population	1400000US06...	Census Tra...	2146
8	+34.0561941	-118.2466502	001	Total population	1400000US06...	Census Tra...	1363
9	+37.5184093	-121.9748369	001	Total population	1400000US06...	Census Tra...	7194
10	+34.0798577	-118.3181008	001	Total population	1400000US06...	Census Tra...	3628
11	+34.0798690	-118.3068568	001	Total population	1400000US06...	Census Tra...	3670
12	+34.0799255	-118.3024972	001	Total population	1400000US06...	Census Tra...	5067
13	+34.0813650	-118.2961539	001	Total population	1400000US06...	Census Tra...	4389
14	+34.0800134	-118.2881064	001	Total population	1400000US06...	Census Tra...	3513
15	+34.0781753	-118.3695958	001	Total population	1400000US06...	Census Tra...	2037
16	+34.1022274	-118.2669741	001	Total population	1400000US06...	Census Tra...	4717
17	+34.0992506	-118.2836893	001	Total population	1400000US06...	Census Tra...	3203
18	+37.5184218	-121.9515237	001	Total population	1400000US06...	Census Tra...	2917
19	+37.5168344	-121.9605916	001	Total population	1400000US06...	Census Tra...	5918
20	+37.5071943	-121.9271475	001	Total population	1400000US06...	Census Tra...	4611
21	+37.4707325	-121.9129556	001	Total population	1400000US06...	Census Tra...	4074

Show All Features

17. `tl_2013_06_tract` :guilabel: `Properties` .



18. Click Style in the Layer Properties dialog. The Layer Properties dialog is displayed. Click the Graduated button. The Graduated Color Ramp dialog is displayed. Click the Column button. The Column is set to ca\_tracts\_pop\_D001. Click the Color ramp button. The Color Ramp dialog is displayed. Click the Mode button. The Mode is set to Quantile (Equal Count). Click the Classify button. The Classify button is checked. Click OK.





19. `guiLabel: 'Zoom in'`



20. The map shows the population density of California by tract. The map is a choropleth map, where the color of the tracts represents the population density. The map is a vector map, where the tracts are represented by lines and the population density is represented by the color of the tracts. The map is a vector map, where the tracts are represented by lines and the population density is represented by the color of the tracts.

