

# Points in Polygon Analysis

QGIS Tutorials and Tips



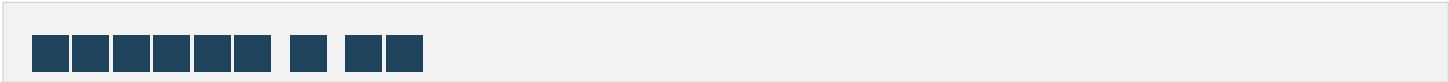
Author

Ujaval Gandhi

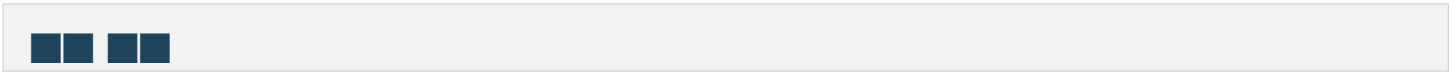
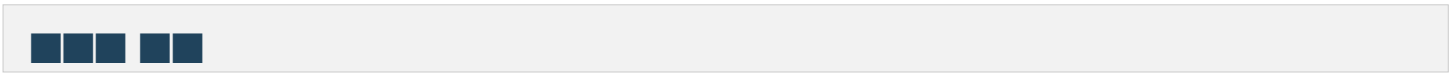
<http://google.com/+UjavalGandhi>

Translations by

SongHyun Choi



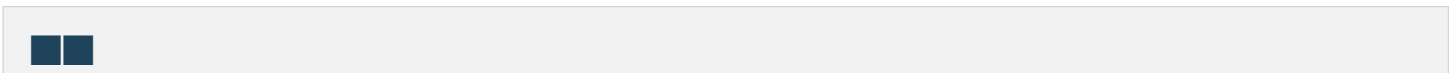
**GIS** ■■■ ■■ ■■ ■■■ ■■■ ■■■■ ■■ ■■■■■ ■■■■■. ■■ ■■■■ ■■ ■■■ ■■ ■■■■ ■■ ■■  
■■■ ■■■■ ■■■■■ ■■ ■■■ ■ ■■■ ■■■■■. ■■■ ■■■ ■■■ **\*\*Points-in-Polygon\*\*** ■■■■. ■■■  
■■■■ ■■■ ■■■■ ■■■ ■■■ ■■■ ■■■ ■■ ■■ ■■ ■■■ ■ ■■■■ ■■■■■ ■■■■■ ■■■■ ■■■ ■■  
■■■■■■ ■■■ ■ ■■■■■.

[illegible]

■ ■ ■ ■ ■ ■ ■ ■ ■ ■ NOAA's National Geophysical Data Center ■ `Significant Earthquake Database <<http://www.ngdc.noaa.gov/nndc/struts/form?t=101650&s=1&d=1>>`\_ ■ ■ ■ ■ ■ . `tab-delimited earthquake data <[http://www.ngdc.noaa.gov/nndc/struts/results?type\\_0=Eact&query\\_0=\\$ID&t=101650&s=13&d=189&dfn=signif.txt](http://www.ngdc.noaa.gov/nndc/struts/results?type_0=Eact&query_0=$ID&t=101650&s=13&d=189&dfn=signif.txt)>`\_ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ .

Natural Earth ■ Admin 0 - Countries ■■■■■■ ■■■■ ■■■■■. `countries <[http://www.naturalearthdata.com/http://www.naturalearthdata.com/download/10m/cultural/ne\\_10m\\_admin\\_0\\_countries.zip](http://www.naturalearthdata.com/http://www.naturalearthdata.com/download/10m/cultural/ne_10m_admin_0_countries.zip)>`\_■ ■

■■■ ■■: [NGDC] [NATURALEARTH]



1. █ █ █ █ --> █ █ █ █ █ █ █ █ █ █ :menuselection:`Layer --> Add Delimited Text  
Layer` █ █ █ █ █ █ █ █ `signif.txt` █ █ █ █ █ █ █ █ .



2. `File` `Open` `Open Delimited Text Layer` `*tab-delimited file*` `File format` `Tab` `X` `Y` `OK`.

## Note

QGIS is a free and open-source geospatial software. It is used for creating maps, analyzing spatial data, and managing geographic information systems. It supports various data formats and has a large community of users and developers.

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

File Name:

Layer name:  Encoding:

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

☐ Comma 
 ☒ Tab 
 ☐ Space 
 ☐ Colon 
 ☐ Semicolon

Other delimiters:  Quote:  Escape:

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)

X field:  Y field:  ☐ DMS coordinates

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

	I_D	FLAG_TSUNAMI	YEAR	MONTH	DAY	HOUR	MINUTE	SECOND	FOCAL_DEPTH	EQ_MAG_MW	EQ_MAG
1	1		-2150								
2	2	Tsu	-2000								
3	3		-2000						18		7.1
4	8		-1566								
5	11		-1450								

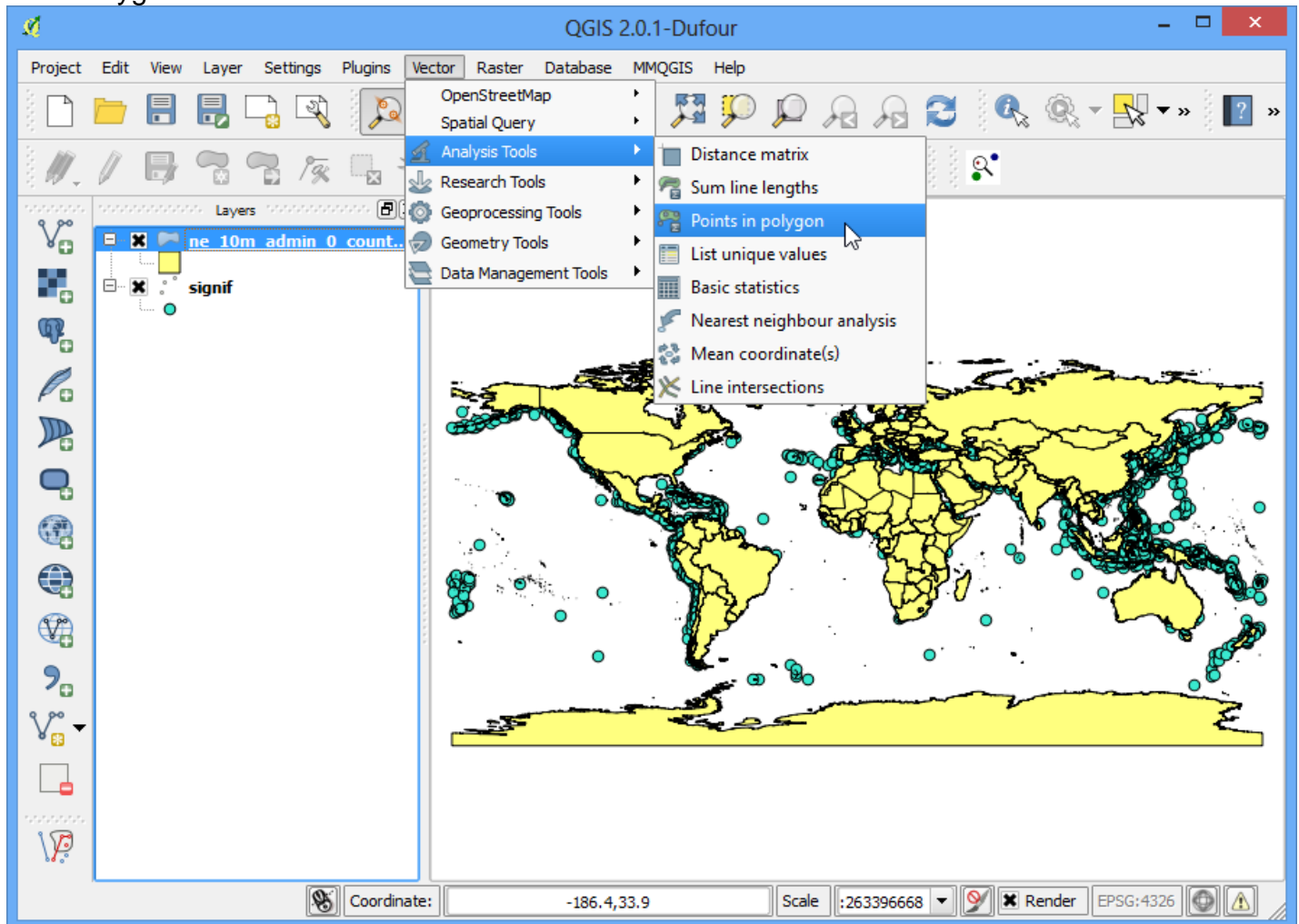
3.    Coordinate Reference System Selector  
   :guilabel:`WGS 84 EPSG:436`   .



4. **QGIS** **Layer** **Add Vector Layer** **ne\_10m\_admin\_0\_countries.zip** **:guilabel:Open** **:guilabel:Select layers to add...** **ne\_10m\_admin\_0\_countries.shp**



5. `menuselection:Vector --> Analysis Tools --> Point in Polygon``.

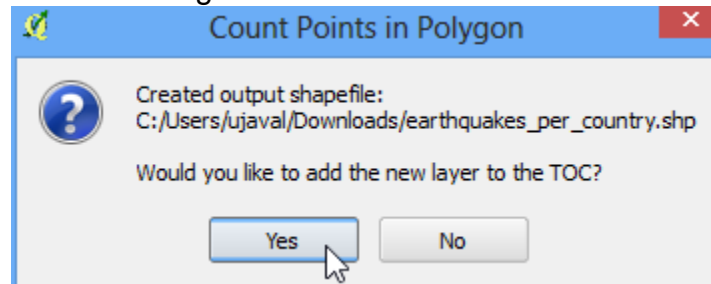


6. `earthquake_per_coutry.shp``. `:guilabel:OK``.

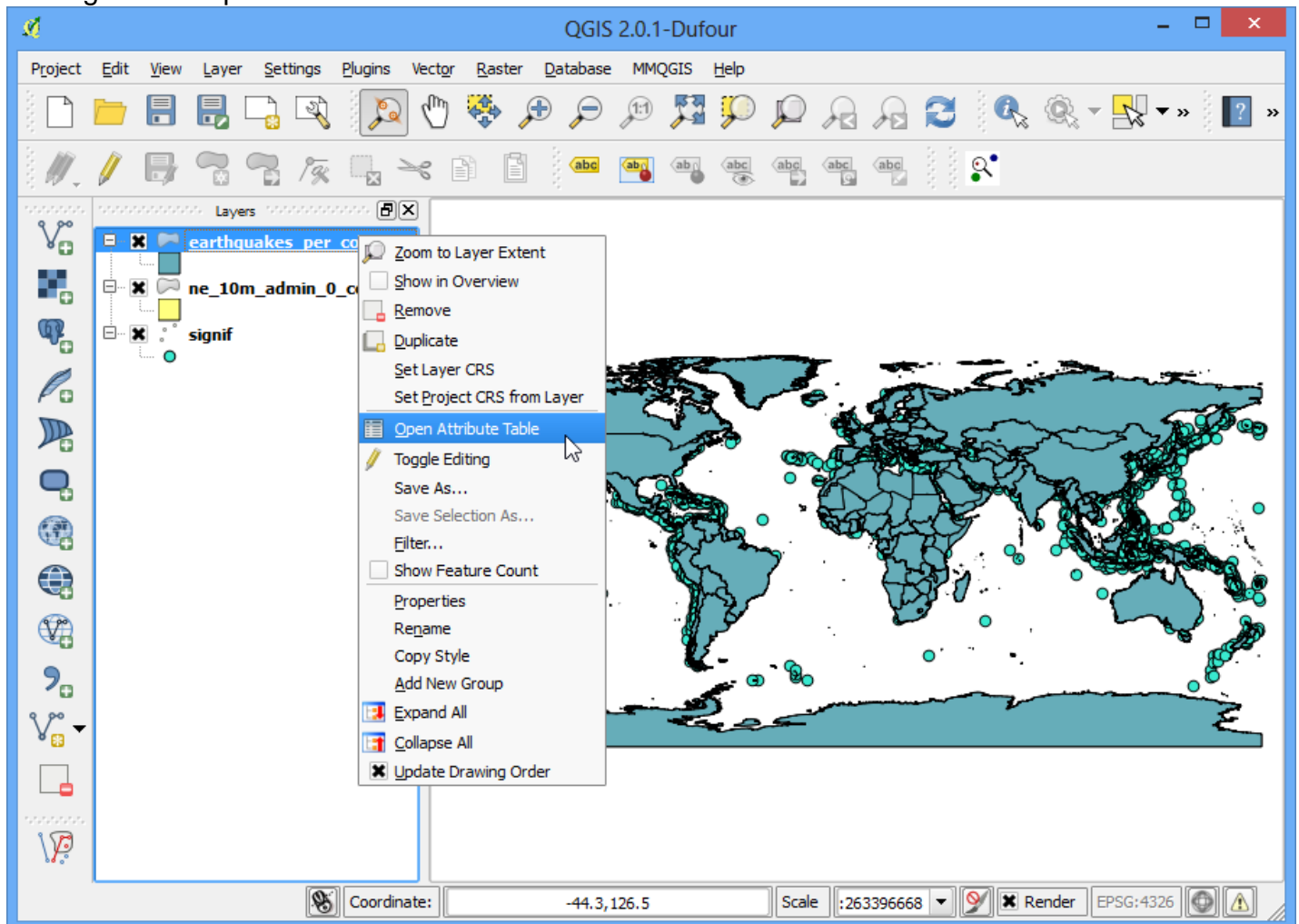
## Note

OK. QGIS 10.

7. TOC :guilabel: `Yes`.



8. TOC :guilabel: `Open Attribute Table`.



9. ``PNTCNT``.

Attribute table - earthquakes\_per\_country :: Features total: 255, filtered: 255, selected: 0

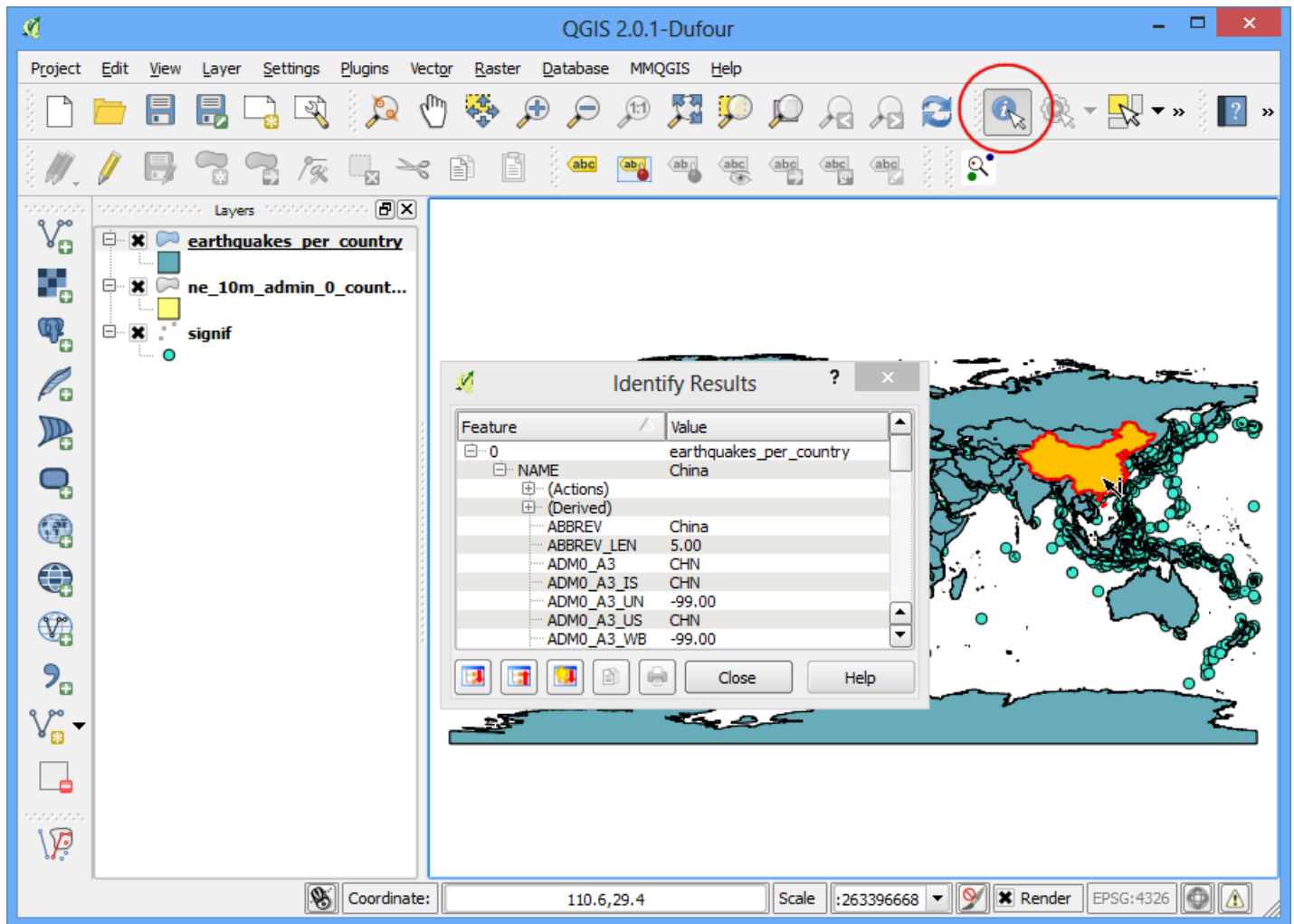
	REGION_WB	NAME_LEN	LONG_LEN	ABBREV_LEN	TINY	HOMEPART	PNTCNT
0	Latin America ...	5.00	5.00	5.00	4.00	-99.00	0.000000000000...
1	South Asia	11.00	11.00	4.00	-99.00	1.00	57.000000000000...
2	Sub-Saharan Af...	6.00	6.00	4.00	-99.00	1.00	0.000000000000...
3	Latin America ...	8.00	8.00	4.00	-99.00	-99.00	0.000000000000...
4	Europe & Centr...	7.00	7.00	4.00	-99.00	1.00	44.000000000000...
5	Europe & Centr...	5.00	13.00	5.00	5.00	-99.00	0.000000000000...
6	Europe & Centr...	7.00	7.00	4.00	5.00	1.00	0.000000000000...
7	Middle East & ...	20.00	20.00	6.00	-99.00	1.00	0.000000000000...
8	Latin America ...	9.00	9.00	4.00	-99.00	1.00	20.000000000000...
9	Europe & Centr...	7.00	7.00	4.00	-99.00	1.00	14.000000000000...
10	East Asia & Pac...	14.00	14.00	9.00	3.00	-99.00	0.000000000000...
11	Antarctica	10.00	10.00	4.00	-99.00	1.00	0.000000000000...
12	East Asia & Pac...	23.00	27.00	7.00	-99.00	-99.00	0.000000000000...
13	Sub-Saharan Af...	22.00	35.00	10.00	2.00	-99.00	0.000000000000...
14	Latin America ...	17.00	19.00	6.00	4.00	1.00	0.000000000000...
15	East Asia & Pac...	9.00	9.00	4.00	-99.00	1.00	9.000000000000...
16	Europe & Centr...	7.00	7.00	5.00	-99.00	1.00	4.000000000000...
17	Europe & Centr...	10.00	10.00	4.00	-99.00	1.00	15.000000000000...
18	Sub-Saharan Af...	7.00	7.00	4.00	-99.00	1.00	1.000000000000...
19	Europe & Centr...	7.00	7.00	5.00	-99.00	1.00	2.000000000000...
20	Sub-Saharan Af...	5.00	5.00	5.00	-99.00	1.00	1.000000000000...
21	Sub-Saharan Af...	12.00	12.00	4.00	-99.00	1.00	0.000000000000...

Show All Features

10. **Field Name:** PNTCNT **Field Type:** Double **Field Length:** 15 **Field Precision:** 15. **Field Alias:** PNTCNT **Field Description:** 2 **Field Units:** . **Field Domain:** .







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