

Points in Polygon Analysis

QGIS Tutorials and Tips



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GIS 中 的 点 在 多 边 形 内 的 判 断 是 一 个 常 见 的 问 题 。 本 文 将 介 绍 一 种 简 便 的 判 断 方 法 ， 即 使 用 **Points-in-Polygon** 算 法 。 该 算 法 可 以 通 过 计 算 点 的 绕 行 数 来 判 断 点 是 否 在 多 边 形 内 。 这 种 方 法 在 GIS 中 有 着 广 泛 的 应 用 ， 例 如 在 地 理 信 息 系 统 中 进 行 空 间 分 析 和 数 据 处 理 时 。

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□□ □□□ □□□ □□□□□ 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=Exact&query_0=\\$ID&t=101650&s=13&d=189&dfn=signif.txt](http://www.ngdc.noaa.gov/nndc/struts/results?type=0=Exact&query_0=$ID&t=101650&s=13&d=189&dfn=signif.txt)> ` _□ □□□□ □□□.

Natural Earth Admin 0 – Countries 10m. countries <http://www.naturalearthdata.com/http://www.naturalearthdata.com/download/10m/cultural/ne_10m_admin_0_countries.zip> _ 10m.

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



2. Open the 'Add Delimited Text Layer' dialog box. In the 'File format' dropdown, select 'Tab-delimited file'. In the 'X field' dropdown, select the field containing the X coordinates. In the 'Y field' dropdown, select the field containing the Y coordinates. Click the 'OK' button to add the layer.

Note

The QGIS interface is designed to be user-friendly and intuitive. The 'Add Delimited Text Layer' dialog box provides a clear and concise way to add new data to your project. The 'File format' dropdown menu allows you to select the appropriate file format for your data. The 'X field' and 'Y field' dropdown menus allow you to select the correct fields for your data. The 'OK' button is used to confirm the selection and add the layer to the project.



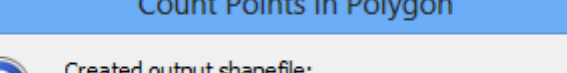
4. □□ □□ □□□ QGIS □ □□□□. □□ □□ □□□ □□□□. □□ □□ □□ --> □□ □□ □□
 Layer ▸ Add Vector Layer □ □□□□. □□□□□
 \ne_10m_admin_0_countries.zip\ □□□ □□ □□ :guilabel: `Open` □ □□□□. □□□
 □□□ □□ :guilabel: `Select layers to add...` □□□□□ □□□□□
 \ne_10m_admin_0_countries.shp\ □ □□□□.



The screenshot shows the QGIS 2.0.1-Dufour software interface. The 'Vector' menu is open, and the 'Analysis Tools' submenu is visible, with 'Points in polygon' selected. The map canvas displays a world map with yellow landmasses and numerous green points. The Layers panel on the left shows two layers: 'ne_10m_admin_0_count...' and 'signif'. The status bar at the bottom indicates the coordinate is -186.4,33.9, the scale is 26339668, and the projection is EPSG:4326.

Note

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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. 00 00 00 ``PNTCNT`` 000 0000 00 00 00 000 00 0000. 0000000 0000 00
 ``PNTCNT`` 00 20 000000. 000 0000 000 000 00 00000 00 0000 0000.



2000 年 1 月 1 日 至 2000 年 12 月 31 日 的 地震 数据。 数据 来源 为 美国 地质 调查 局 (USGS) 的 全球 地震 目录 (Global Earthquake Catalogue)。