

Calculating Line Lengths and Statistics

QGIS Tutorials and Tips



Author

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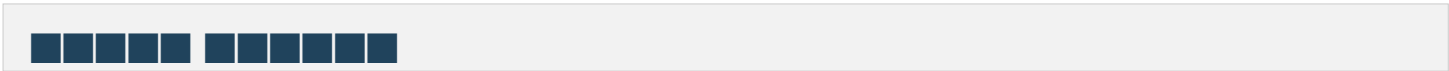
<http://google.com/+UjavalGandhi>

Translations by

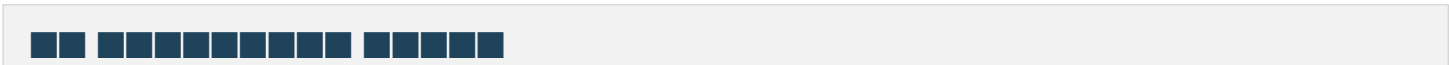
Marina Pavlova Ilya Trofimov Fayçal Fatihi



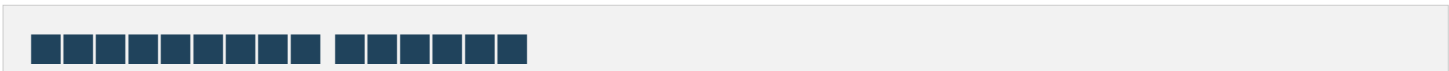
■ QGIS 是基於開放原始碼的地理資訊系統，其核心功能包括地圖製作、數據管理、空間分析、數據轉換及數據共享。QGIS 支持多種數據格式，如 Shapefile、GeoJSON、PostGIS 等，並提供豐富的插件系統，可擴展其功能。QGIS 的界面友好，操作簡便，適合不同層次的用戶使用。QGIS 的數據庫支持包括 PostgreSQL/PostGIS、MySQL、Oracle 等，並提供強大的空間分析工具，如缓冲区分析、疊置分析、網絡分析等。QGIS 的數據轉換功能強大，支持多種格式之間的轉換，如 Shapefile 轉 GeoJSON、GeoJSON 轉 Shapefile 等。QGIS 的數據共享功能強大，支持多種協議，如 WMS、WFS、WMTS 等，可實現數據的共享和互操作。QGIS 的界面友好，操作簡便，適合不同層次的用戶使用。QGIS 的數據庫支持包括 PostgreSQL/PostGIS、MySQL、Oracle 等，並提供強大的空間分析工具，如缓冲区分析、疊置分析、網絡分析等。QGIS 的數據轉換功能強大，支持多種格式之間的轉換，如 Shapefile 轉 GeoJSON、GeoJSON 轉 Shapefile 等。QGIS 的數據共享功能強大，支持多種協議，如 WMS、WFS、WMTS 等，可實現數據的共享和互操作。



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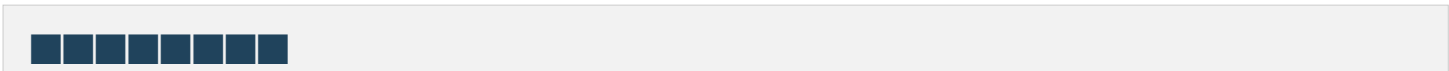


- [illegible]

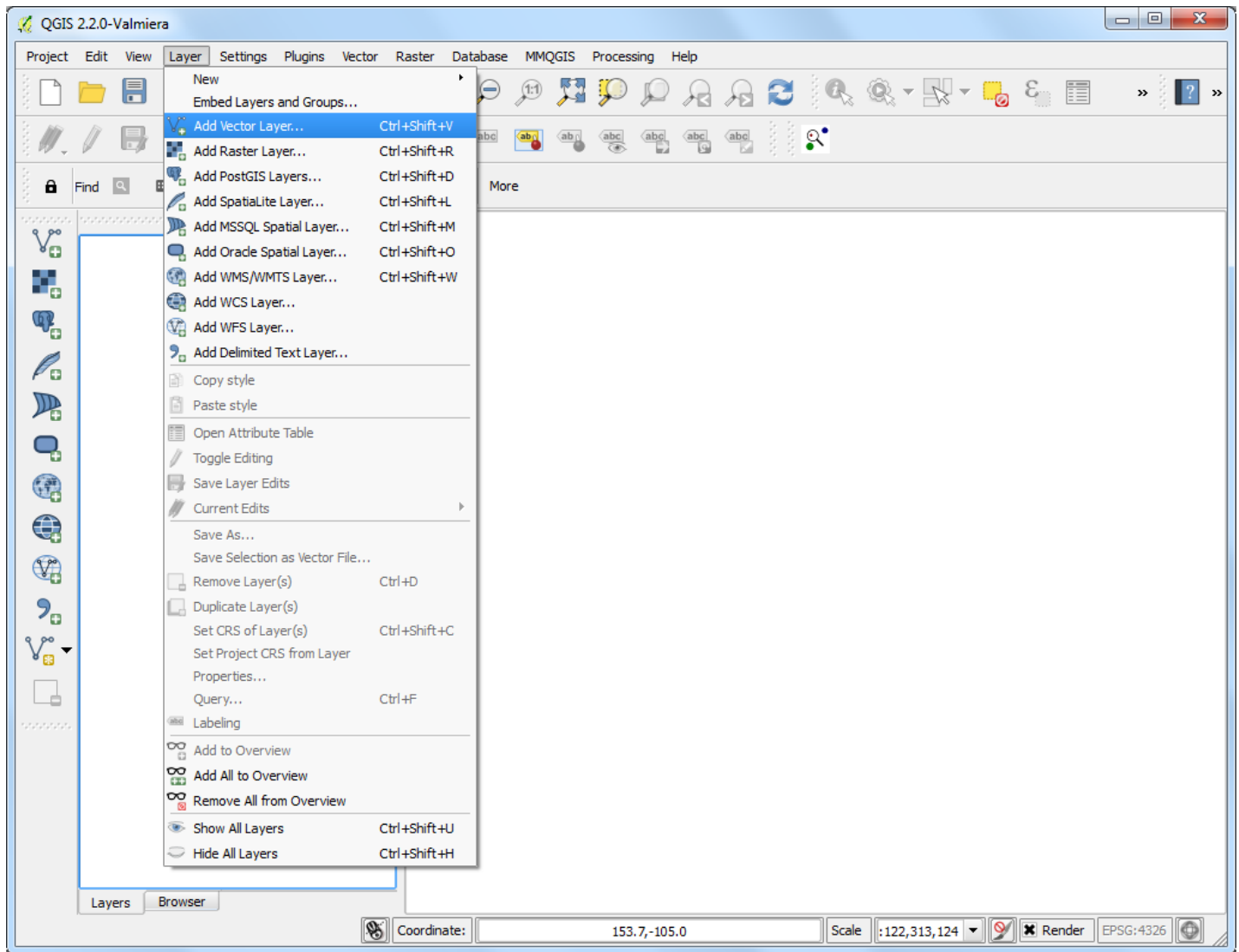


Natural Earth 

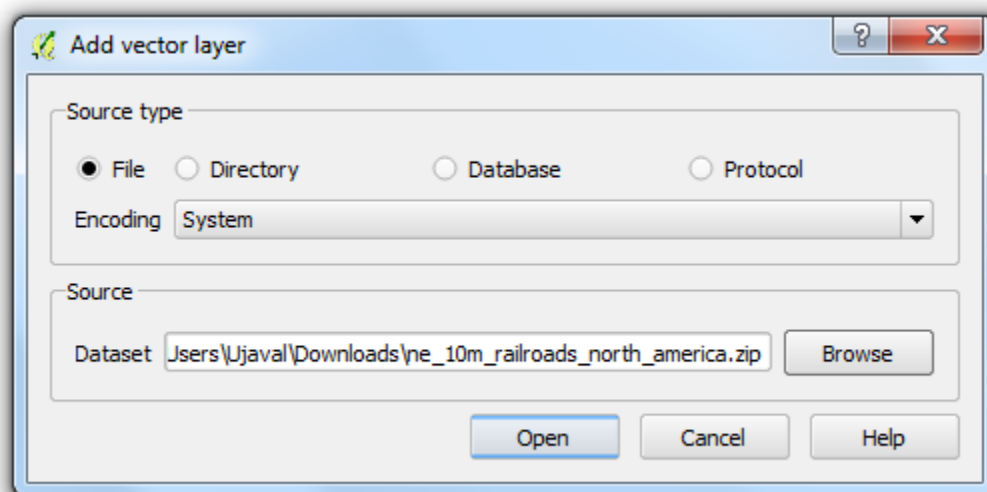
■■■■■■■■■■ ■■■■■■: [NATURALEARTH]



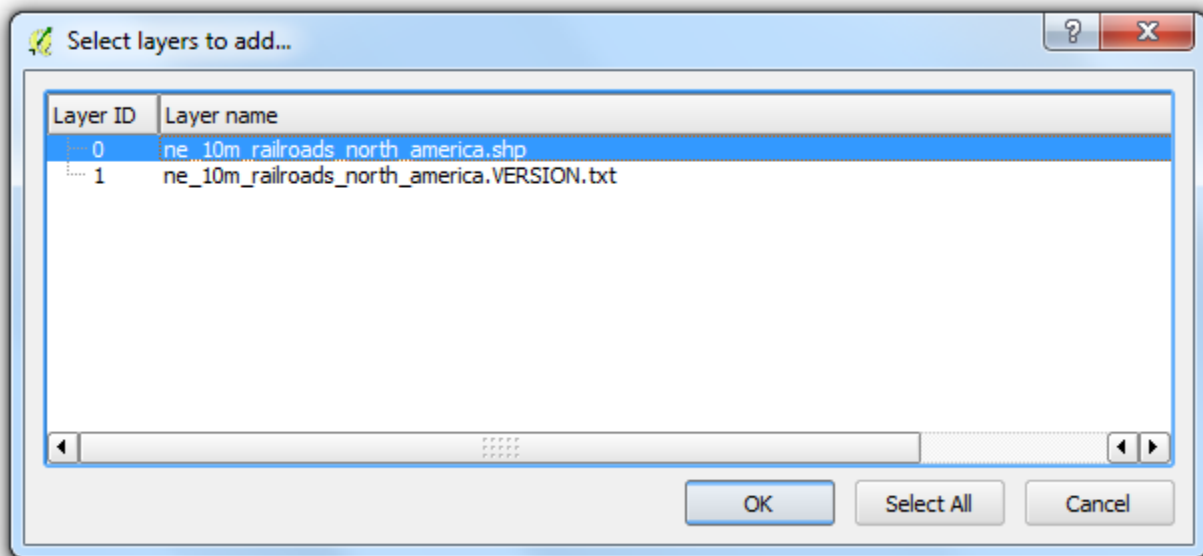
1. ■■■■■■■■■■ ■ ■■■■ ■ ■■■■■■■■■■ ■■■■■■■■■■ ■■■■.



2. ■■■■■■■■ ■■■■■■■■■■ ■■■■■■ ne_10m_railroads_north_america.zip ■
 ■■■■■■■■ ■■■.



3. ne_10m_railroads_north_america.shp.



4. [REDACTED] [REDACTED] [REDACTED], [REDACTED] [REDACTED], [REDACTED]
[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]. [REDACTED] [REDACTED] [REDACTED]
[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED], [REDACTED] [REDACTED]
[REDACTED] [REDACTED], [REDACTED] [REDACTED] [REDACTED]. [REDACTED] [REDACTED] [REDACTED]
[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED].

Attribute table - ne_10m_railroads_north_america :: Features total: 1127, filtered: 1127, selected: 0

	scalerank	featurcda	sov_a3	uident	add	natriscle	continent
0	8	Railroad	USA	1506	0	0	North America
1	9	Railroad	USA	1606	1	5	North America
2	8	Railroad	USA	1706	0	0	North America
3	8	Railroad	USA	1806	0	0	North America
4	8	Railroad	USA	1906	0	0	North America
5	8	Railroad	USA	2006	0	0	North America
6	8	Railroad	USA	2106	0	0	North America
7	9	Railroad	USA	2206	1	5	North America
8	8	Railroad	USA	2306	0	0	North America
9	8	Railroad	USA	2406	0	0	North America
10	8	Railroad	USA	2506	0	0	North America
11	8	Railroad	USA	2606	0	0	North America
12	8	Railroad	USA	2706	0	0	North America
13	8	Railroad	USA	2806	0	0	North America
14	9	Railroad	USA	2906	1	5	North America
15	9	Railroad	USA	3006	1	5	North America
16	8	Railroad	USA	3106	0	0	North America
17	8	Railroad	USA	3206	0	0	North America
18	8	Railroad	USA	3306	0	0	North America
19	8	Railroad	USA	3506	0	0	North America
20	8	Railroad	USA	3606	0	0	North America
21	8	Railroad	USA	3706	0	0	North America
22	8	Railroad	USA	3806	0	0	North America
23	9	Railroad	USA	3906	1	5	North America

Show All Features

[illegible]

Attribute table - ne_10m_railroads_north_america :: Features total: 1127, filtered: 1127, selected: 0

Select features using an expression

	scalerank		uid	add	natrscale	continent
0	8	Railroad	1506	0	0	North America
1	9	Railroad	1606	1	5	North America
2	8	Railroad	1706	0	0	North America
3	8	Railroad	1806	0	0	North America
4	8	Railroad	1906	0	0	North America
5	8	Railroad	2006	0	0	North America
6	8	Railroad	2106	0	0	North America
7	9	Railroad	2206	1	5	North America
8	8	Railroad	2306	0	0	North America
9	8	Railroad	2406	0	0	North America
10	8	Railroad	2506	0	0	North America
11	8	Railroad	2606	0	0	North America
12	8	Railroad	2706	0	0	North America
13	8	Railroad	2806	0	0	North America
14	9	Railroad	2906	1	5	North America
15	9	Railroad	3006	1	5	North America
16	8	Railroad	3106	0	0	North America
17	8	Railroad	3206	0	0	North America
18	8	Railroad	3306	0	0	North America
19	8	Railroad	3506	0	0	North America
20	8	Railroad	3606	0	0	North America
21	8	Railroad	3706	0	0	North America
22	8	Railroad	3806	0	0	North America
23	9	Railroad	3906	1	5	North America

Show All Features

7. **Task 7: Filtering features by country**. The task is to filter the features by country. The country is stored in the attribute 'sov_a3'. The task is to filter the features where 'sov_a3' is equal to 'USA'. The task is to filter the features where 'sov_a3' is equal to 'USA'.



8. ■ ■■■■■■■■ ■■■■ QGIS ■■ ■■■■■■■■, ■■■ ■■■■■ ■■■■■ ■■■ ■■■■■■■■■■ ■ ■■■■■■■■■■ ■ ■■■■■■■■.



9. `ne_10m_railroads_north_america`



10. Save the selection as a new shapefile named `usa_railroads.shp`. This will create a new shapefile containing only the selected features from the original dataset.

Note

The `usa_railroads.shp` file is a shapefile containing the selected features from the original dataset. The shapefile is created in the current project's coordinate system, which is `EPSG:4326` (WGS 1984). The shapefile is saved in the `data` directory of the project. The shapefile is a vector file that stores the geometry and attributes of the features. The shapefile is a standard format for storing spatial data in QGIS.



11. **Save the layer as a shapefile, using the following settings:**
 Format: ESRI Shapefile
 Save as: C:/Users/Ujaval/Downloads/usa_railroads.shp
 Encoding: System
 CRS: Layer CRS
 Symbology export: No symbology
 Scale: 1:50000
 Skip attribute creation: ☐
 Add saved file to map: ☐
 More Options >>
 OK Cancel Help



12. ■ Save ■■■■■■■■■■ ■■■■, ■■■... ■■■■■■, ■■■■■■■■■■ Add ■■■■■■■■■■
■■■■, ■■■■■ ■■■■■■■■ ■■ ■■■■■ ■ ■■■■■■■■ OK.



14. ■■■■■■■■■■ ■■■■■■■■ ■■■■■■■■ ■■ ■■■■ usa_railroads ■ ■■■■■■■■ *Open*
 ■■■■■■■■■■ ■■■■■■■■.



17. ■■■■■■■■ ■ Attribute ■■■■■, ■■ ■■■■■■ ■■■■■■ ■■■■■ ■■■■■■ *length_km* ■■■■■■■■. ■■■■■■■■ *Toggle* ■■■■■■■■■■■■■■■■■■■ ■■■■■■, ■■■■■■ ■■■■■■■■■■ ■■■■■■■■■■ ■ ■■■■■■ ■■■■■■■■■■.

Basics statistics

Input Vector Layer
usa_railroads

☐ Use only selected features

Target field
length_km

Statistics output

Parameter	Value
Mean	127.751569149
StdDev	125.80562595
Sum	96069.18
Min	0.01
Max	936.6
N	752.0
CV	0.984767755...
Number of unique values	743

Press Ctrl+C to copy results to the clipboard

0% OK Close