

# Calculating Line Lengths and Statistics

QGIS Tutorials and Tips



Author

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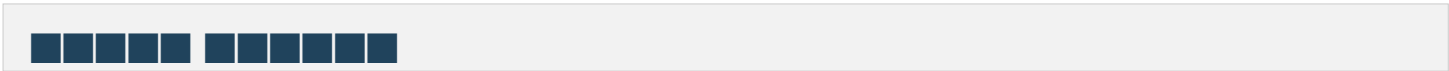
<http://google.com/+UjavalGandhi>

Translations by

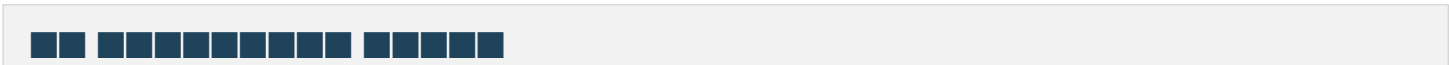
Marina Pavlova Ilya Trofimov Fayçal Fatihi



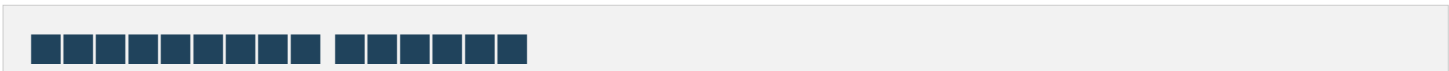
■ QGIS 是基於開放原始碼的地理資訊系統，其核心功能包括地圖製作、數據管理、空間分析等。QGIS 支持多種數據格式，如 Shapefile、GeoJSON、PostGIS 等，並提供豐富的插件系統，可擴展其功能。QGIS 的界面友好，操作簡便，適合不同水平的用戶使用。QGIS 的數據源支持非常廣泛，包括本地文件、網絡服務（如 WMS、WFS）以及各種數據庫（如 PostgreSQL/PostGIS、MySQL、Oracle 等）。QGIS 的空間分析功能強大，支持多種空間查詢、疊加分析、缓冲区分析等。QGIS 的輸出格式多樣，可生成各種格式的圖表、PDF、SVG 等。QGIS 的社區非常活躍，提供了大量的教程、文檔和插件，方便用戶學習和開發。



THE INFORMATION CONTAINED HEREIN IS UNCLASSIFIED EXCEPT WHERE SHOWN OTHERWISE BY THE MARKINGS.

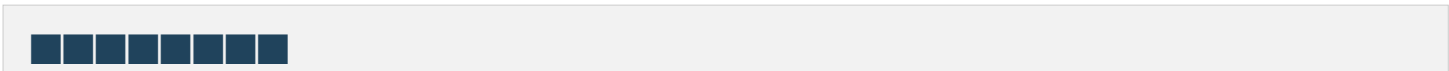


- **संस्कृतभाषासहित सर्व विषयसंबंधी प्रश्नोत्तरांची सुविधा उपलब्ध आहे.**
- **संस्कृतभाषासंबंधी प्रश्न विचारल्यानंतर १ तासात उत्तर देण्याची सुविधा उपलब्ध आहे (२०२२).**
- **संस्कृतभाषासंबंधी प्रश्नोत्तरांची सुविधा २०२२ मध्ये उपलब्ध आहे.**



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]  
[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED].





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. **Filtering features by country**. The **sov\_a3** field contains the ISO 3166-1 alpha-3 country code. To filter the data to only include features in the United States, use the expression `"sov_a3" = 'USA'`.



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





9. `ne_10m_railroads_north_america`





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 Table**, **Toggle** **length\_km** **Attribute Table**. **Toggle** **length\_km** **Attribute Table**.





19. **Input** `usa_railroads`. **Target** `length_km` **OK**. **Sum** `length_km` - **Basic statistics** **OK**.

## Note

The `Basic statistics` tool is used to calculate the sum of the `length_km` field for the `usa_railroads` layer. The result is displayed in the `Basic statistics` dialog box. The `Basic statistics` tool is also used to calculate the sum of the `length_km` field for the `ne_10m_railroads_north_america` layer. The result is displayed in the `Basic statistics` dialog box.

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