

MAKING MAPS VISUALIZATIONS USING PYTHON

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- Software Developer, Kartoza
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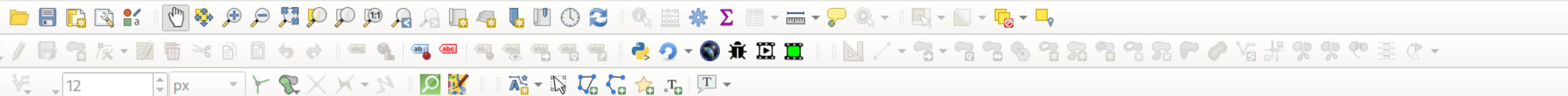
TOPICS

- PYTHON MAPS TOOLS
- INTRODUCTION TO QGIS
- TEMPORAL CONTROLLER
- PYQGIS AND PLUGINS
- EXAMPLE MAPS VISUALIZATIONS AND ANIMATIONS

LOCATION DATA WITH PYTHON

- Geopandas
- Rasterio
- QGIS

Project Edit View Layer Settings Plugins Vector Raster Database Web Mesh Processing Help



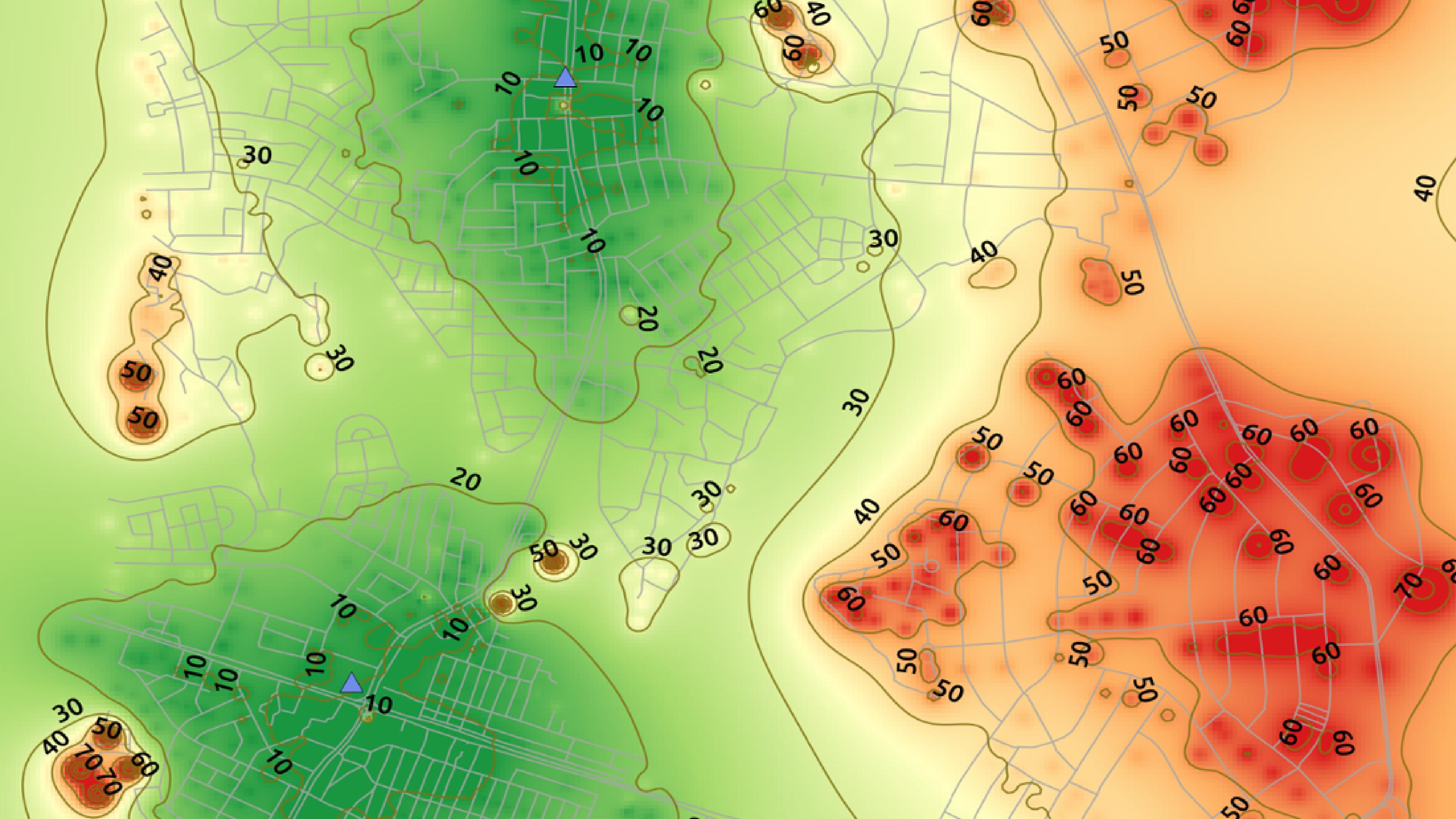
Browser

- Esri National Geographic
- Esri Ocean
- Esri Satellite
- Esri Standard
- Esri Terrain
- Esri Topo World
- Esri Transportation
- Google Maps
- Google Satellite
- Google Satellite Hybrid
- Google Terrain
- Google Terrain Hybrid
- Mapzen Global Terrain
- Open Weather Map Clouds
- Open Weather Map Temperature
- Open Weather Map Wind Speed
- OpenStreetMap**
- OpenStreetMap H.O.T.
- OpenStreetMap Monochrome
- OpenStreetMap Standard
- OpenTopoMap
- Stamen Terrain
- Stamen Toner
- Stamen Toner Light
- Stamen Watercolor
- Strava All
- Strava Run
- Wikimedia Hike Bike Map

Proj... Debugging/Develop... B... La... Processing

Type to locate (Ctrl+K) 1 legend entries removed.

Coordinate -857714,4805367 Scale 1:364782 Magnifier 100% Rotation 0.0 ° Render EPSG:3857



QGIS APPLICATION

- Analyse and publish geospatial information
- Create maps, edit and visualize them
- Free to download and use
- Development is a team effort!



PyQGIS



 [Upload a plugin](#)

Plugins

[Featured](#)[All](#)[Stable](#)[New Plugins](#)[Updated Plugins](#)[Experimental](#)[Popular](#)[Most voted](#)[Top downloads](#)[Most rated](#)[QGIS Server plugins](#) [Plugin Tags ↗](#) [Download latest](#)

QGIS Python Plugins Repository

STAC API Browser

(4) votes

QGIS plugin for reading STAC API catalogs

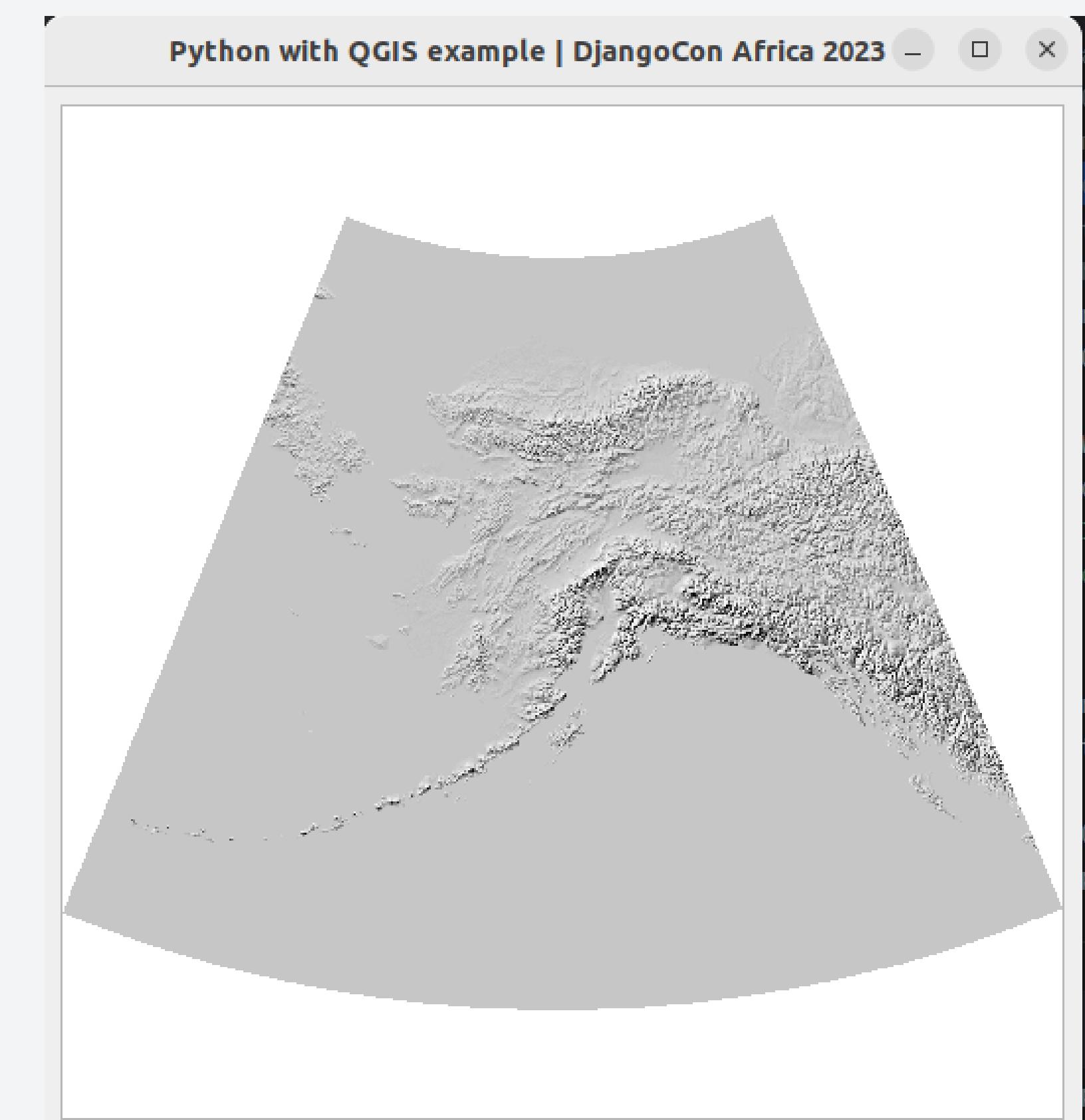
[About](#) [Details](#) [Versions](#)

Version	Experimental	Minimum QGIS version	Downloads	Uploaded by	Date
1.1.1	no	3.0.0	3112	samtwsa	Aug 24, 2022, 12:55 PM GMT+3
1.1.0	no	3.0.0	345	samtwsa	Jul 19, 2022, 04:17 PM GMT+3
1.0.0	no	3.0.0	1286	samtwsa	Jan 20, 2022, 11:36 AM GMT+3



MAKING MAP ANIMATIONS USING PYTHON WITH QGIS

```
1 from qgis.core import *
2 from qgis.gui import QgsMapCanvas
3 from qgis.PyQt.QtWidgets import QFrame, QGridLayout, QMainWindow
4
5 application = QgsApplication(argv=[], GUlenabled=False)
6
7
8 QgsApplication.setPrefixPath(prefixPath='/usr', useDefaultPaths=True)
9 QgsApplication.initQgis()
10
11 main_window = QMainWindow()
12 main_window.setWindowTitle(
13     "Python with QGIS example | "
14     "DjangoCon Africa 2023"
15 )
16 frame = QFrame()
17 main_window.setCentralWidget(frame)
18 layout = QGridLayout(frame)
19
20 map_canvas = QgsMapCanvas()
21 layout.addWidget(map_canvas)
22
23 raster_file_uri = 'https://github.com/qgis/QGIS-Sample-Data/' \
24     'blob/master/qgis_sample_data/raster/' \
25     'SR_50M_alaska_nad.tif?raw=true'
26
27 raster_layer = QgsRasterLayer(raster_file_uri, 'test_layer')
28
29 QgsProject.instance().addMapLayer(raster_layer)
30 map_canvas.setLayers([raster_layer])
31 map_canvas.setExtent(raster_layer.extent())
32
33 main_window.show()
34 application.exec_()
```



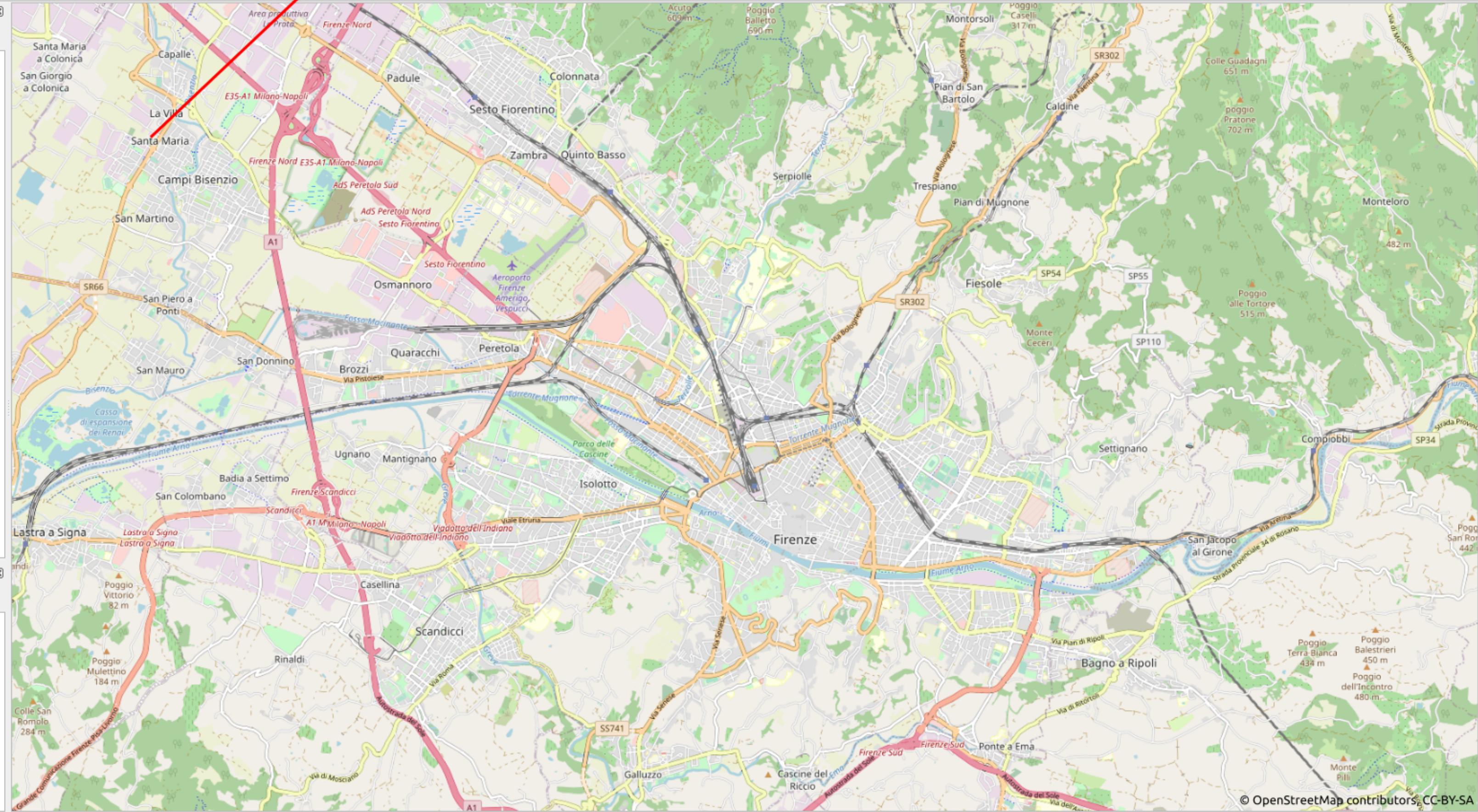


Browser

- Favorites
- Spatial Bookmarks
- Project Home
- Home
- /
- MS SQL Server
- WMS/WMTS
- Vector Tiles
- XYZ Tiles
- WFS / OGC API - Features
- WCS
- ARCGIS REST Servers
- GeoNode
- MapTiler
- GeoPackage
- SpatiaLite
- PostgreSQL
- SAP HANA

Layers

- OSM Standard



conda-forge / packages / qgis

3.30.1



16

A free and open source Geographic Information System (GIS).

Conda

Files

Labels

Badges

License: [GPL-2.0-only](#)

Home: <http://qgis.org/>

Development: <https://github.com/qgis/QGIS>

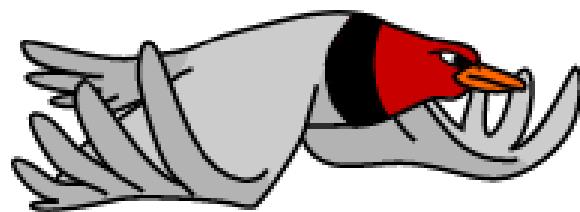
Documentation: <https://www.qgis.org/en/docs/index.html>

749798 total downloads

Last upload: 2 hours and 39 minutes ago

[Home Page](#)

QGIS Animation Workbench



Welcome to the QGIS Animation Workbench (QAW). QAW is a [QGIS Plugin](#) that will help you bring your maps to life! Let's start with a quick overview. Click on the image below to view a 14 minute walkthrough on YouTube.





SUPPORT AND CONTRIBUTION



<https://github.com/qgis/QGIS>



<https://github.com/qgis/QGIS/issues>

Resources

https://github.com/Samweli/djangocon_africa_2023

A s a n t e n i !

SPECIAL THANKS



DJANGOCON
AFRICA

