Montpellier Network's Package

Project HMMA238

Montpellier University

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Introduction

Package python : ▸ Github network

Project subject

- videos and widget,
- transport : car, bike and walk,
- from La Maison du Lez to Place Eugène Bataillon,
- shortest path.

Important functions

- type_transport,

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- distance_type_transport,

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- type_transport,
- distance_type_transport,
- times,
- animation_type_transport.

Vizualisation of the shortest path

net.type_transport('walk')

FIGURE – Vizualisation of the shortest path in walk.

net.type_transport('drive')

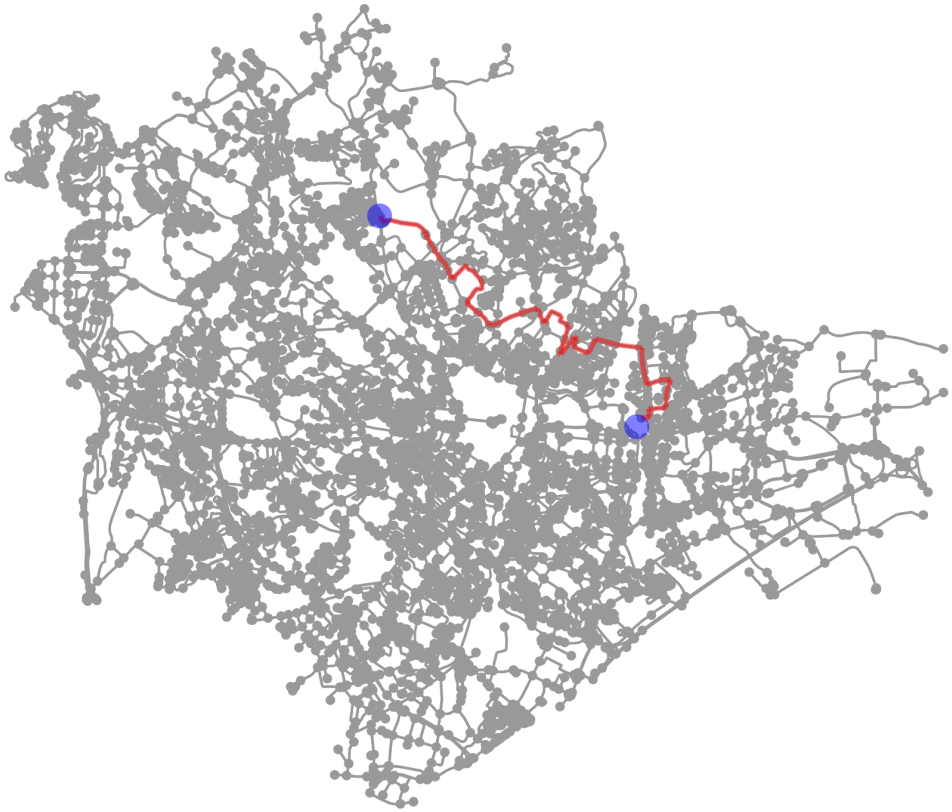

FIGURE – Vizualisation of the shortest path in car.

net.type_transport('bike')

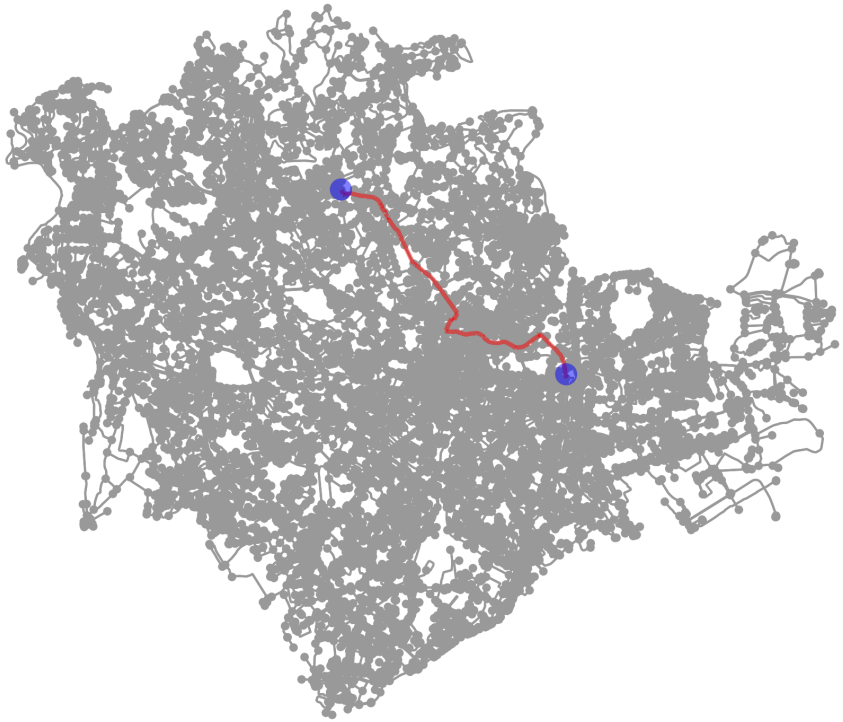

FIGURE – Vizualisation of the shortest path in bike.

To see the animations and the widget, click on this link ▸ report then launch the notebook.

Visualizing shortest path on interactive map with folium.plugins

```
data = net.geojson_data('walk')
net.geojson_visualization(data)
```

FIGURE – shortest path animation for in walk

```
data = net.geojson_data('drive')
net.geojson_visualization(data)
```

FIGURE – shortest path animation for in car

```
data = net.geojson_data('bike')
net.geojson_visualization(data)
```

FIGURE – shortest path animation for in bike

Study time of functions

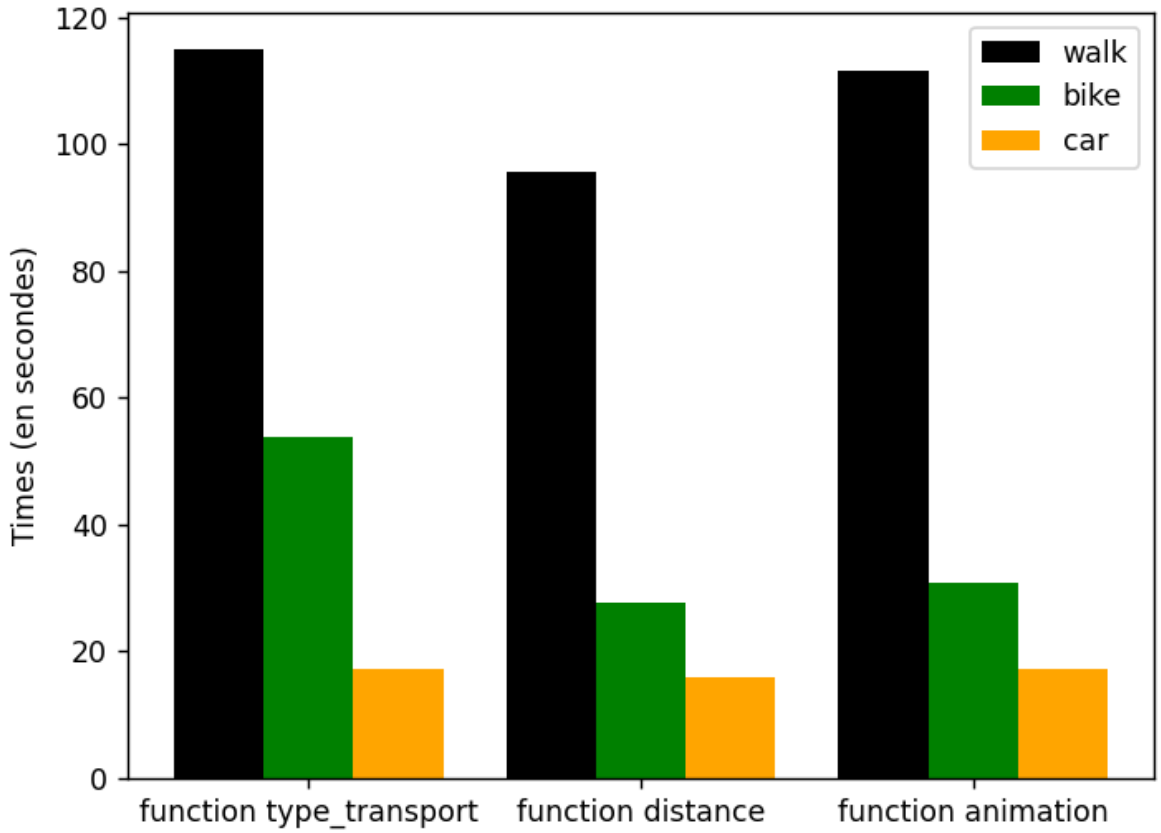

FIGURE – Histogram of the time of functions according to the type of transport.

Study time of animation function with "TimestampedGeoJson"

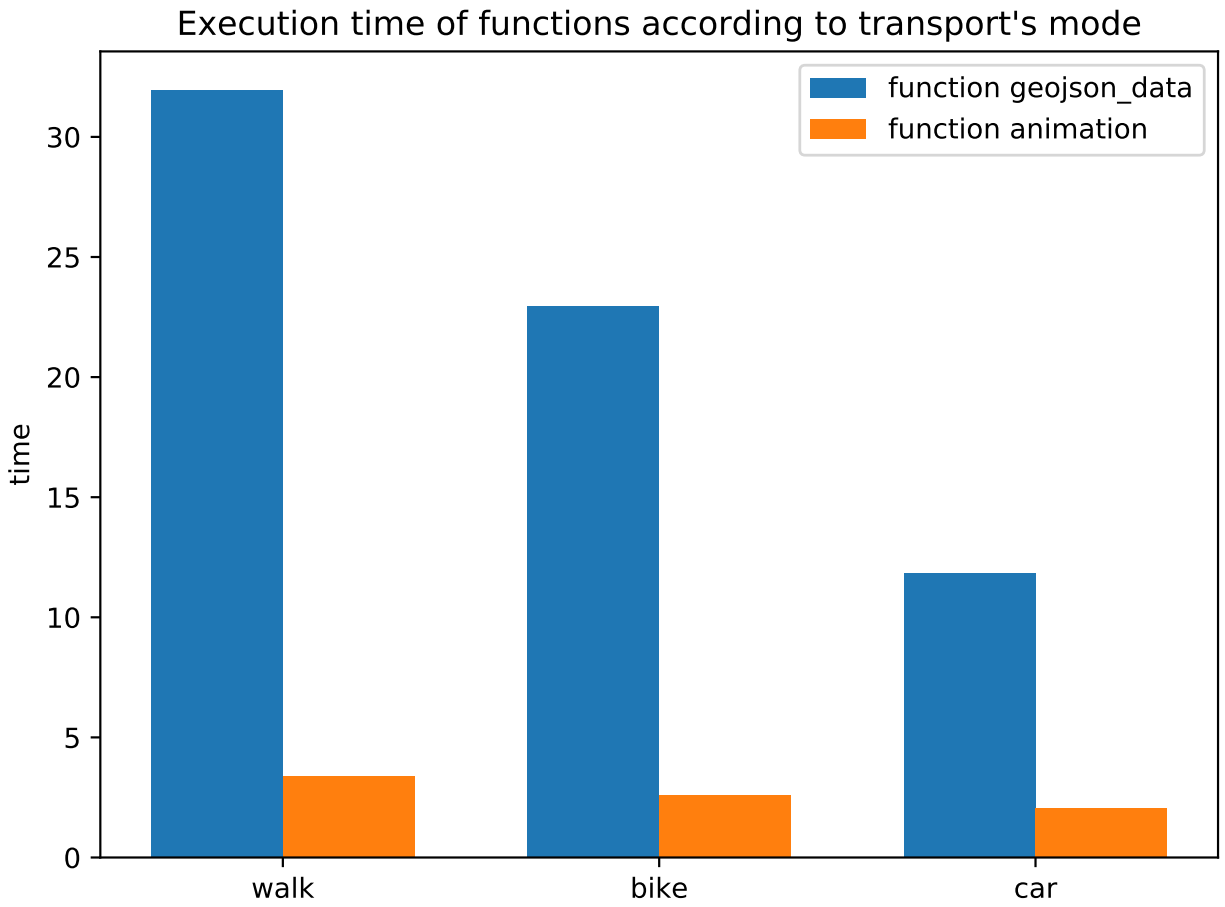

FIGURE – Histogram of the time of functions according to the type of transport.

Conclusion

What we have learnt

- osmnx,
- networkx,
- improvements.

Upgrades

- computation time,
- display informations on the map.