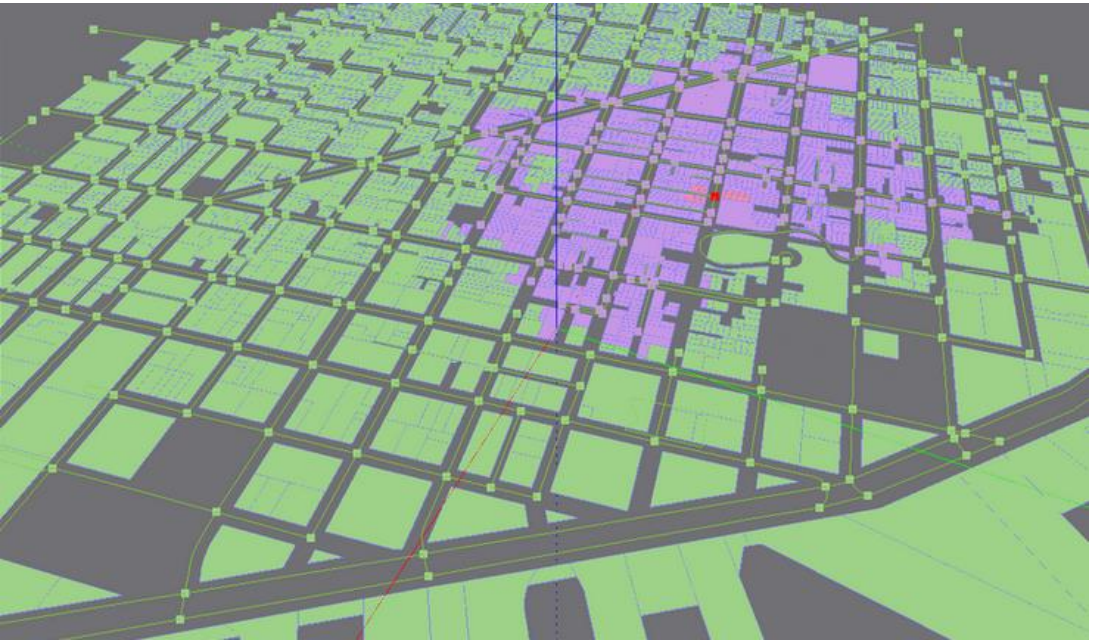
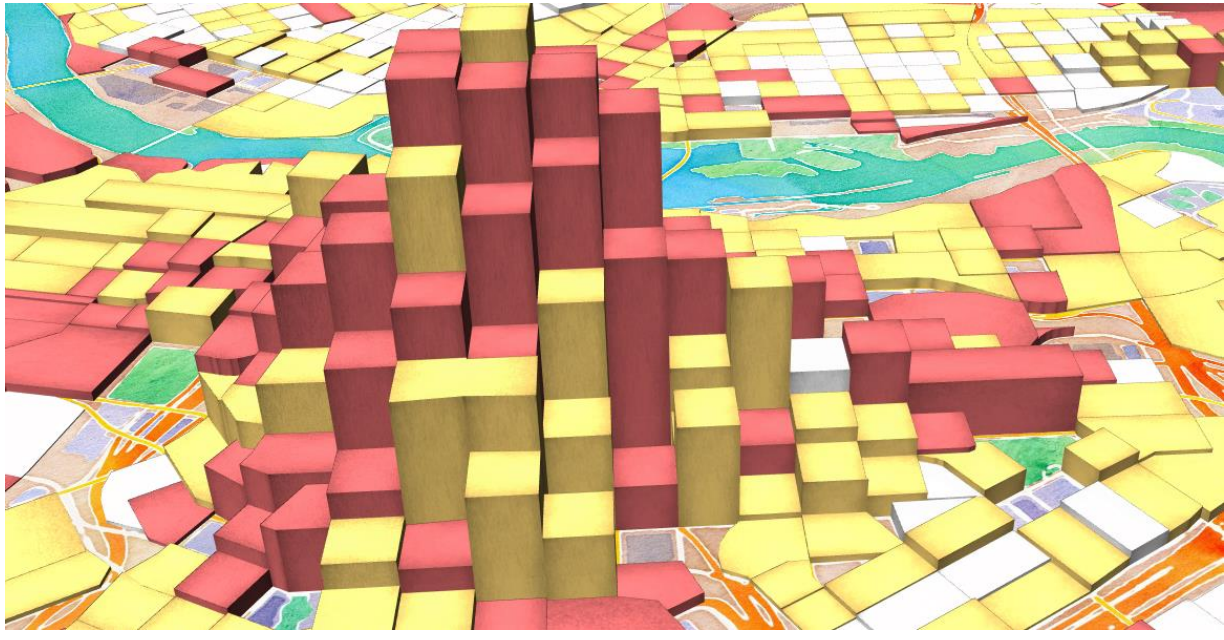
Pandana

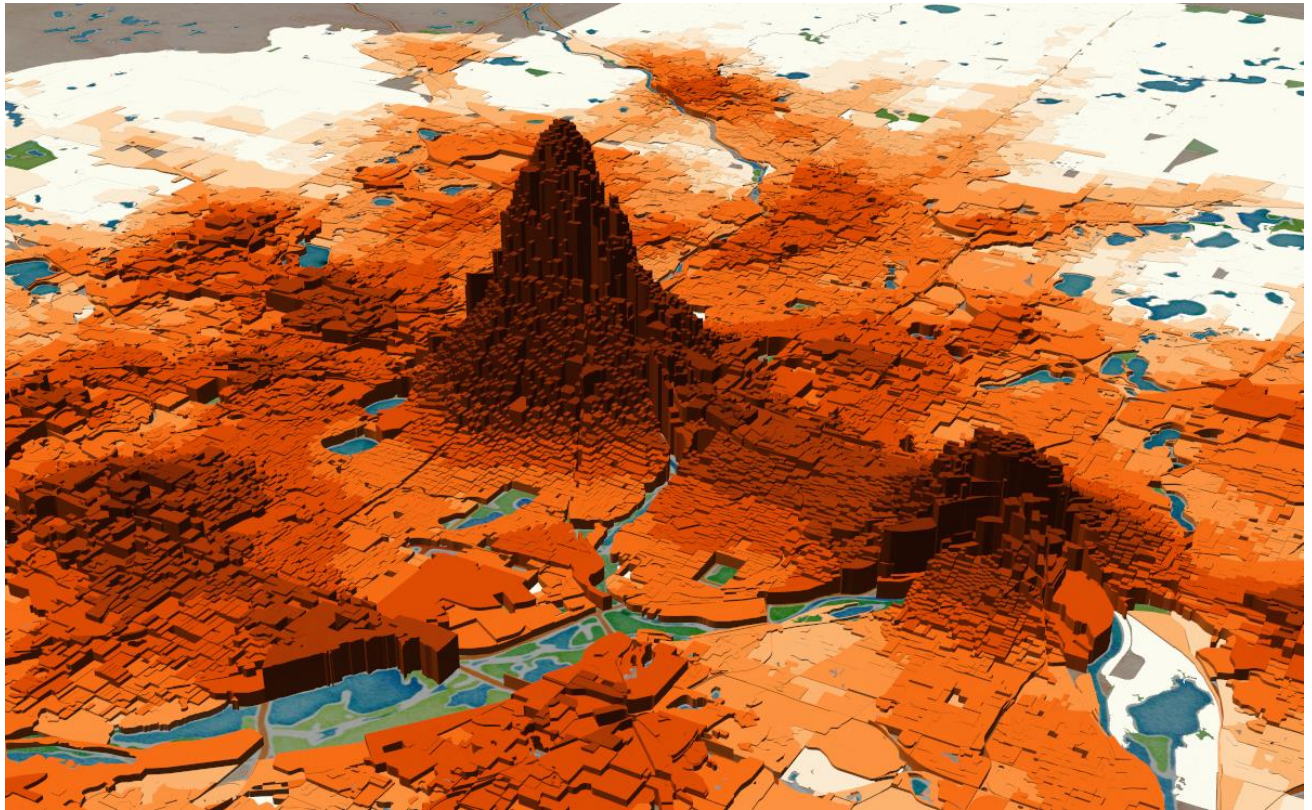
Fast network-based accessibility variable calculations





Goals

- Learn:
  - **Why you might want to use Pandana**
  - **How to use Pandana on your own data**

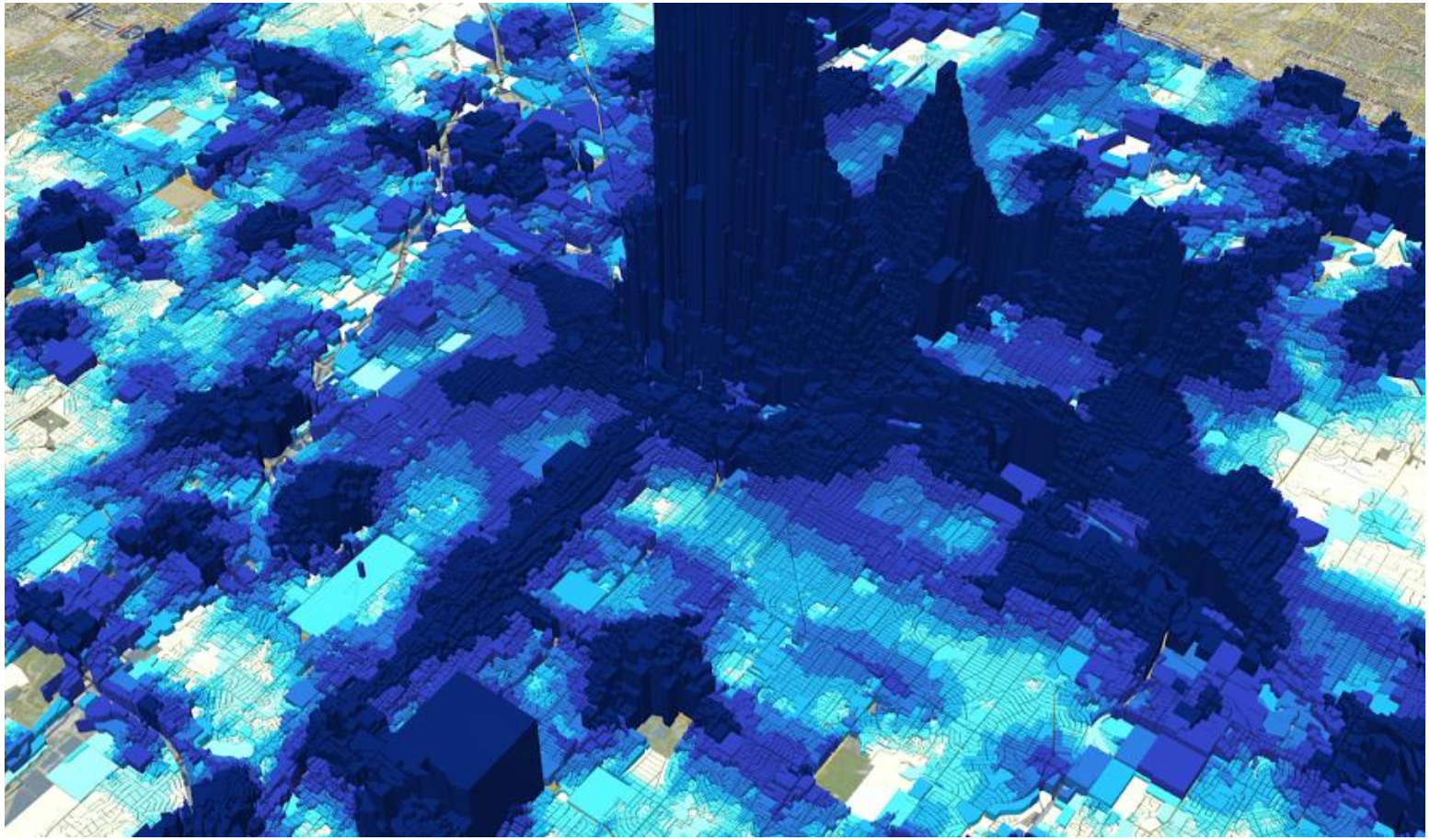


Agenda

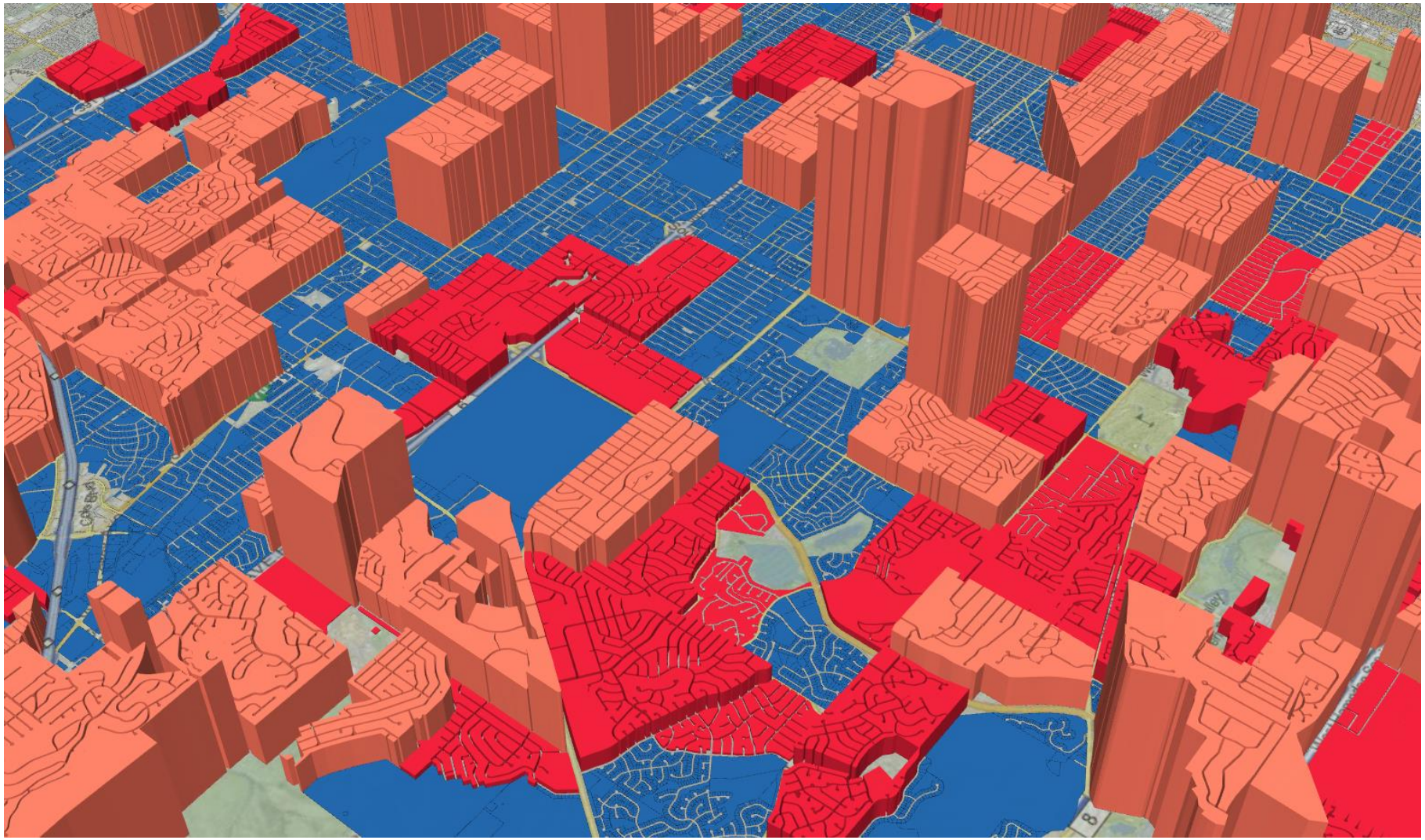
- What and Why
- Inputs
- Example
  - Input data
  - Steps
  - Options
  - Visualizing
- How you can do it
- Summary

What is Pandana

Network-based accessibility calculator

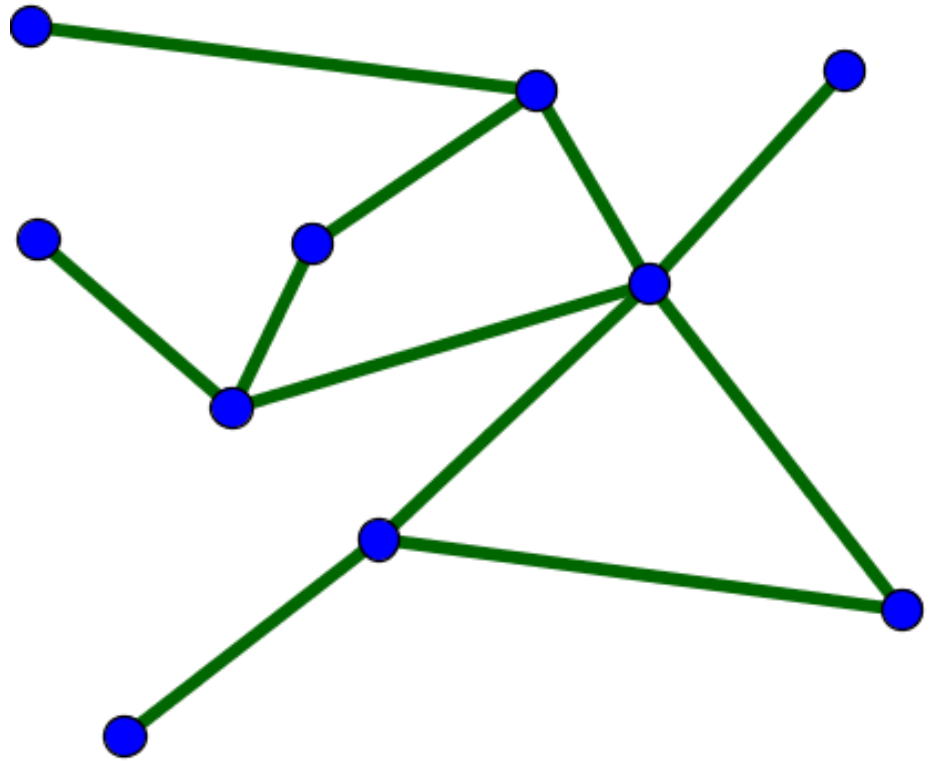


Avoid Zonal Aggregations



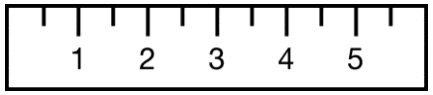
Input data

1. Spatial dataset to analyze
2. Network
   - **Edges**
   - **Nodes**



Options

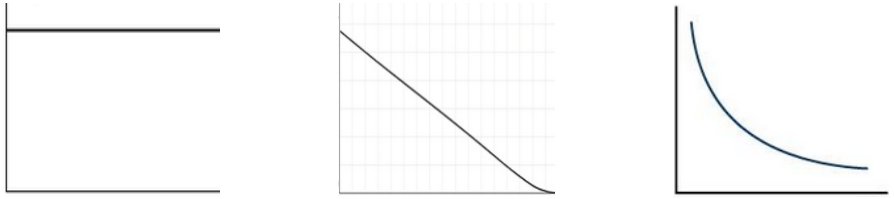
- **Radius**

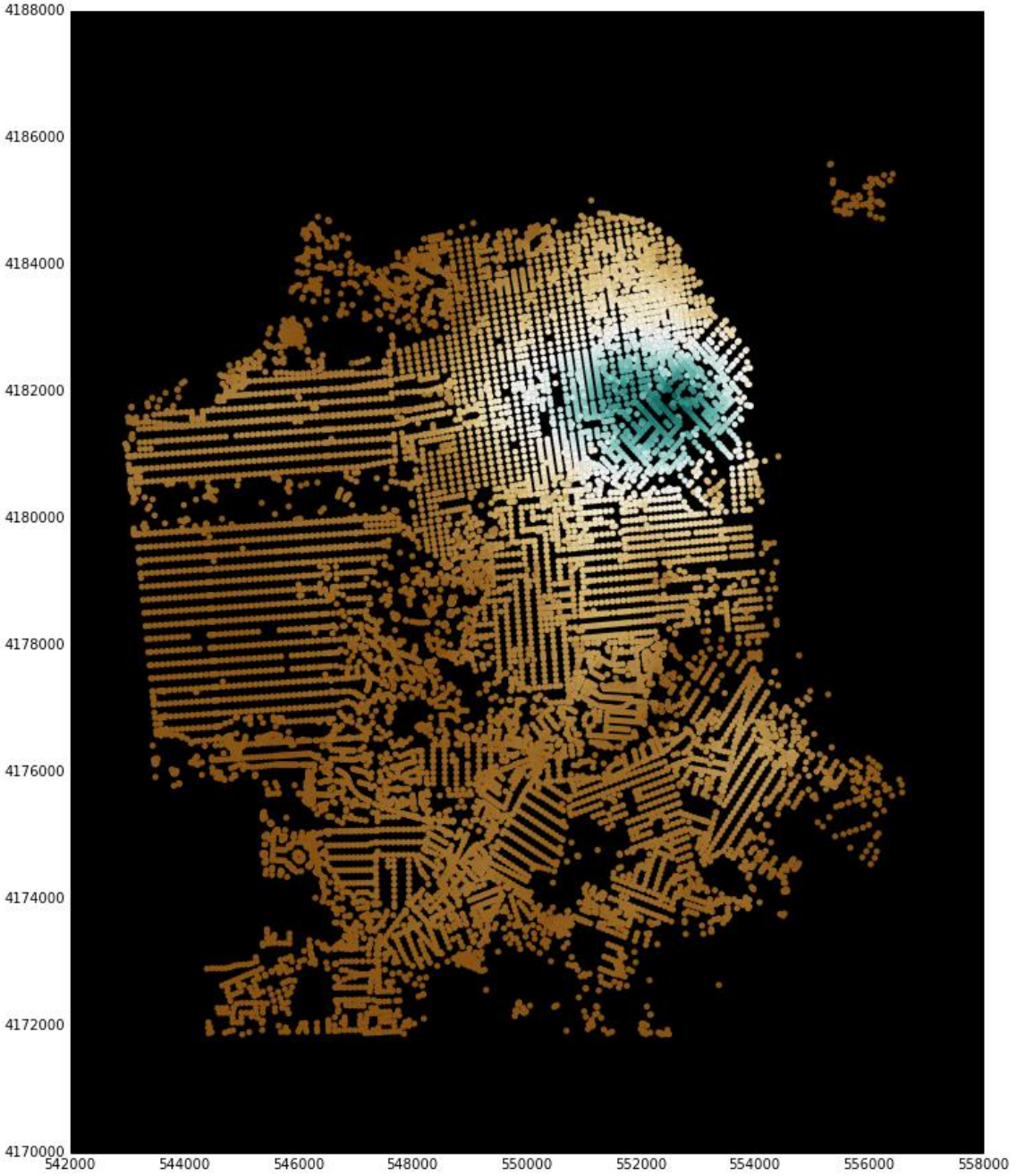


- **Aggregation type**

$\sum$ $\bar{x}$ σ

- **Decay**





Example

Data and IPython notebooks

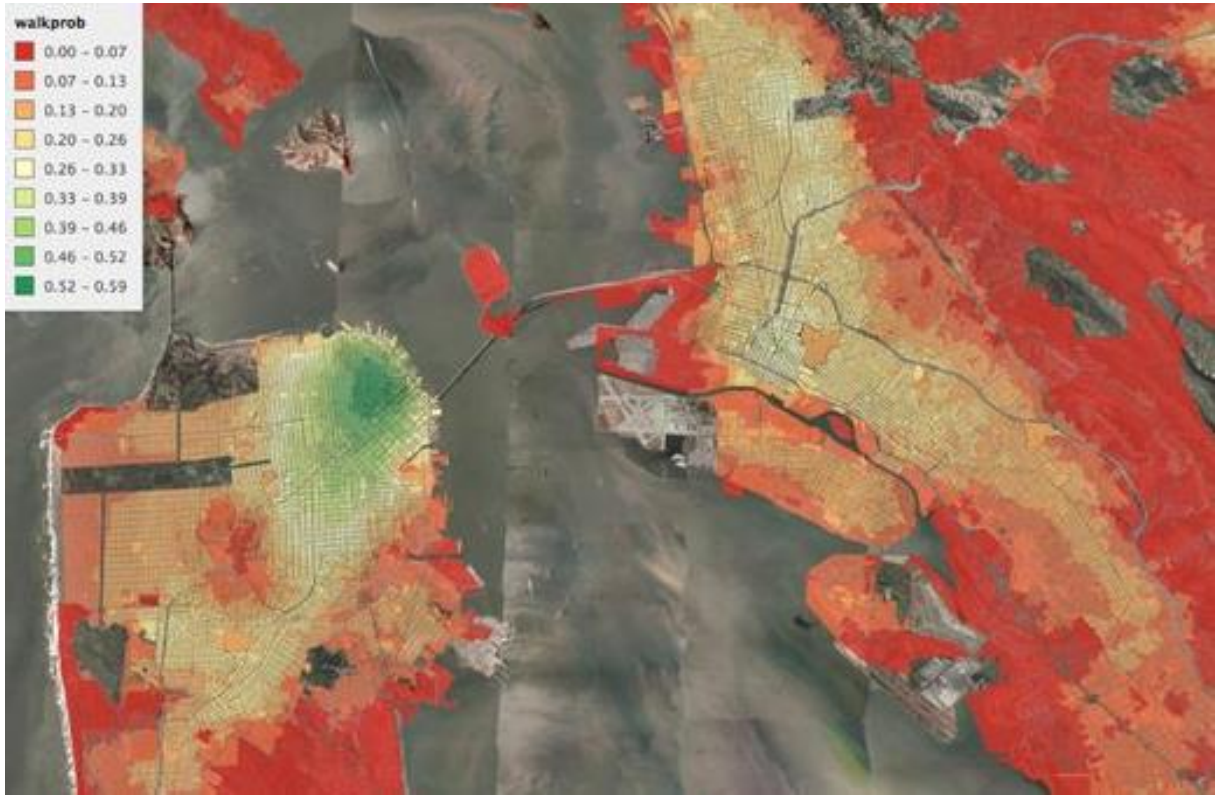
- https://github.com/synthicity/user_meeting_2014

Dependencies

- Anaconda python
- pip install pandana
- pip install urbansim

Your next steps

- Find a spatial dataset (or take your existing UrbanSim model data)
- Create a network
- Apply Pandana
- Visualize



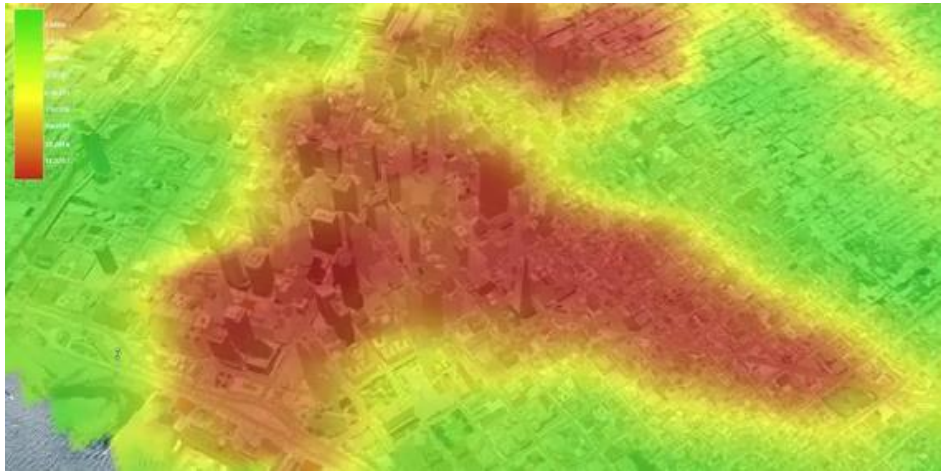
Learn more

Read the docs:

http://synthicity.github.io/pandana

Detailed tutorials:

https://github.com/fscottfoti/pandana_presentation



Summary

- Pedestrian modeling and sustainability
- Spatial analysis without arbitrary boundaries
- Better explanatory variables
- Great for visualization
- Provides context
- Create your own walkability metric