



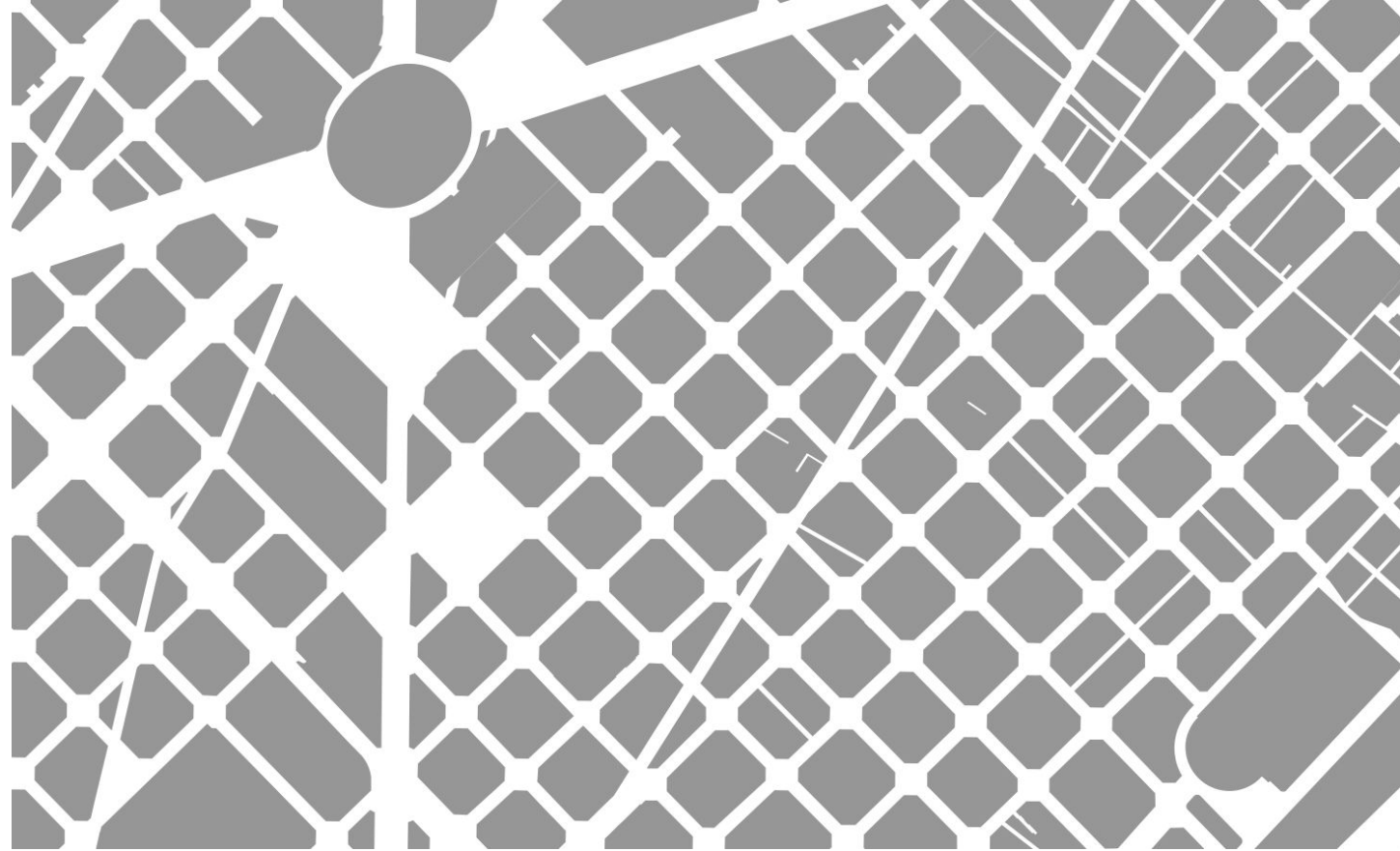
MASTER IN CITY & TECHNOLOGY
DIGITAL TOOLS AND BIG DATA - Second Term
2019/2020

FACULTY DIEGO PAJARITO

Big Data

Spatial Analysis

Districts Neighbourhoods Blocks

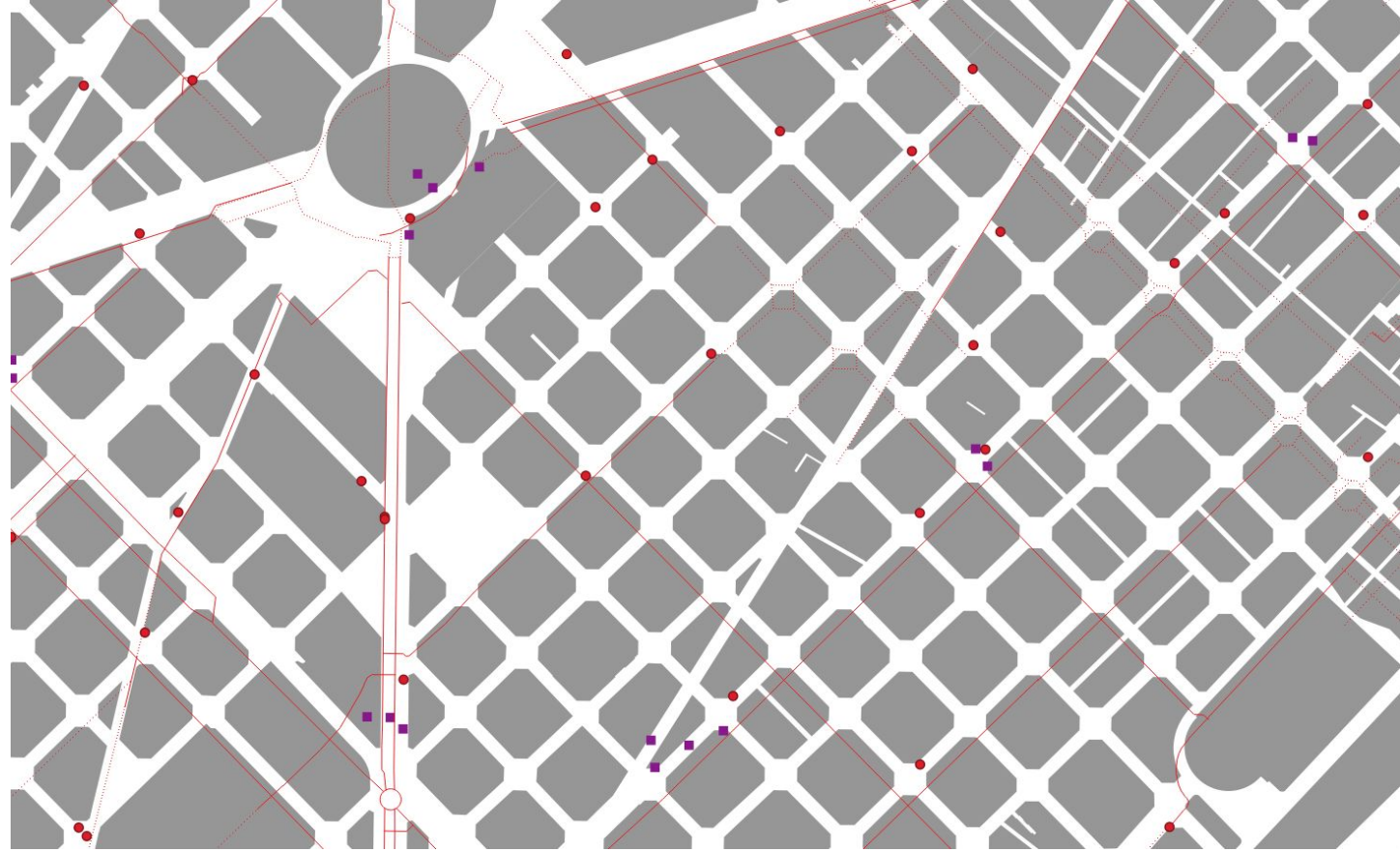


Data sources:

<https://opendata-ajuntament.barcelona.cat/data/en/dataset/20170706-districtes-barris>

<https://w20.bcn.cat/cartobcn/>

**Shared bicycle
stations
Transport nodes
Bicycle lanes
Cyclable streets**



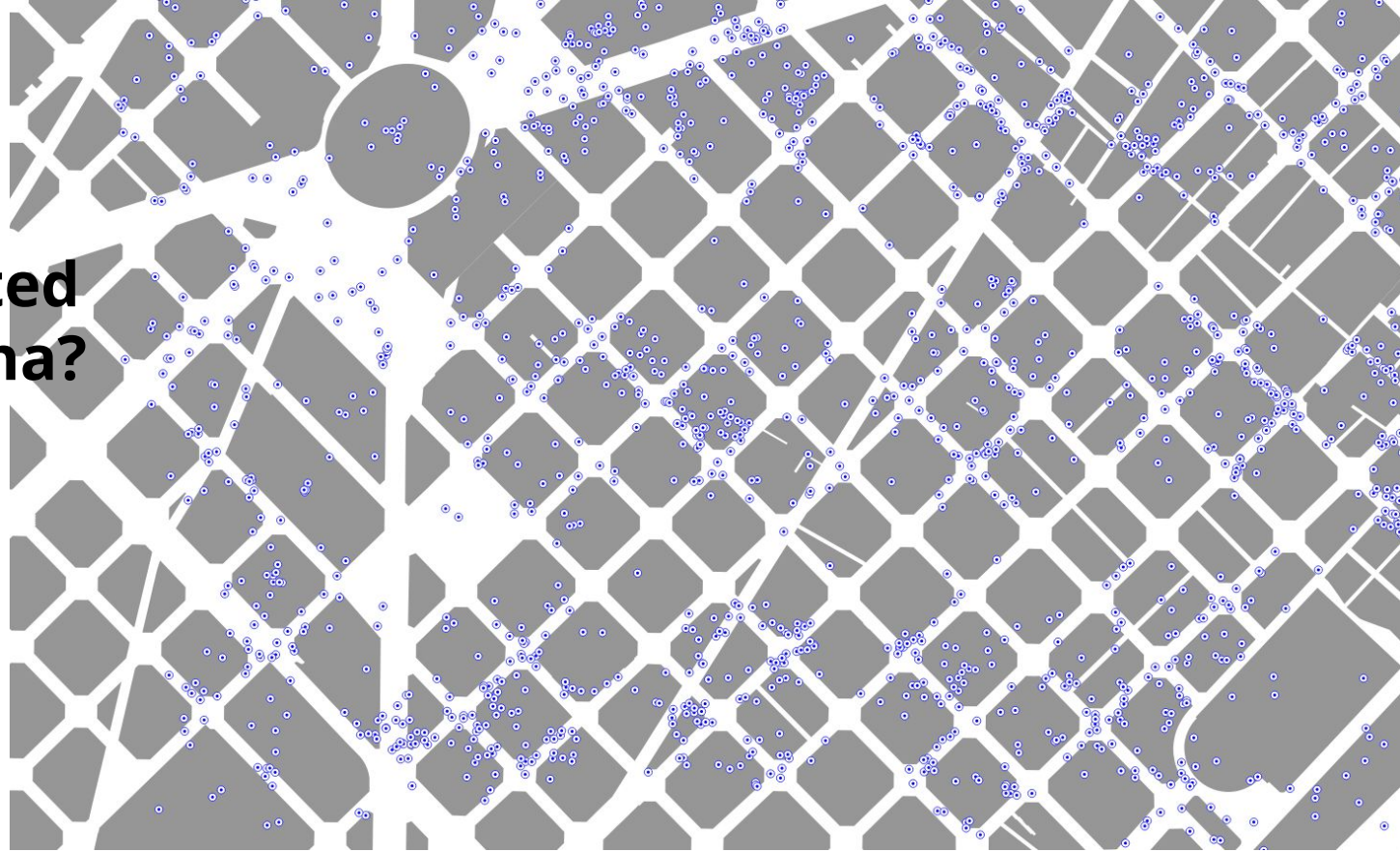
Data sources:

<https://opendata-ajuntament.barcelona.cat/data/es/dataset/bicing>

What are the isolated areas in barcelona?

Isolated from:

- Local commerce
- Public transport
- Sustainable transport



- **Density of local commerce**
- **Access to public transport**
- **Access to cycling infrastructure**

Big Data

Data providers

Use a reference data set to get a single location

<https://opencagedata.com/api>



An API to convert coordinates to and from places

Easy, Open, Worldwide, Affordable

51.5266, -0.0798 → Shoreditch, London

48.1599, 11.5761 → Schwabing, München

-33.4278, -70.6115 → Providencia, Santiago

Check out the database of here maps

<https://go.engage.here.com/student-sample-data.html>

Data regions:

- Calgary, Canada
- Chennai, India
- Eindhoven, Netherlands
- Kaohsiung, Taiwan
- León, Mexico
- Medellín, Colombia
- Nairobi, Kenya
- Nonthaburi, Thailand
- Perth, Australia
- Stavropol, Russia
- Poznań, Poland
- Pune, India



Commercial and social data sources

Mapbox API <https://docs.mapbox.com/api>

OpenStreetCam <https://openstreetcam.org/>

Mapillary API <https://www.mapillary.com/>

Wikiloc <https://www.wikiloc.com/>

Strava <https://labs.strava.com/>

Uber <https://movement.uber.com/>

Yelp <https://www.yelp.com/dataset>

<https://www.economist.com/leaders/2017/05/06/the-worlds-most-valuable-resource-is-no-longer-oil-but-data>

<https://www.forbes.com/sites/bernardmarr/2018/03/05/heres-why-data-is-not-the-new-oil/#5b2ecb5d3aa9>

Open data sources

Dbpedia/Wikipedia <http://es.dbpedia.org/sparql>

OSM

World bank <https://data.worldbank.org/>

EU open data portal <https://data.europa.eu/euodp/en/data/>

Google Open Data <https://www.google.com/publicdata/directory>

<https://www.economist.com/leaders/2017/05/06/the-worlds-most-valuable-resource-is-no-longer-oil-but-data>

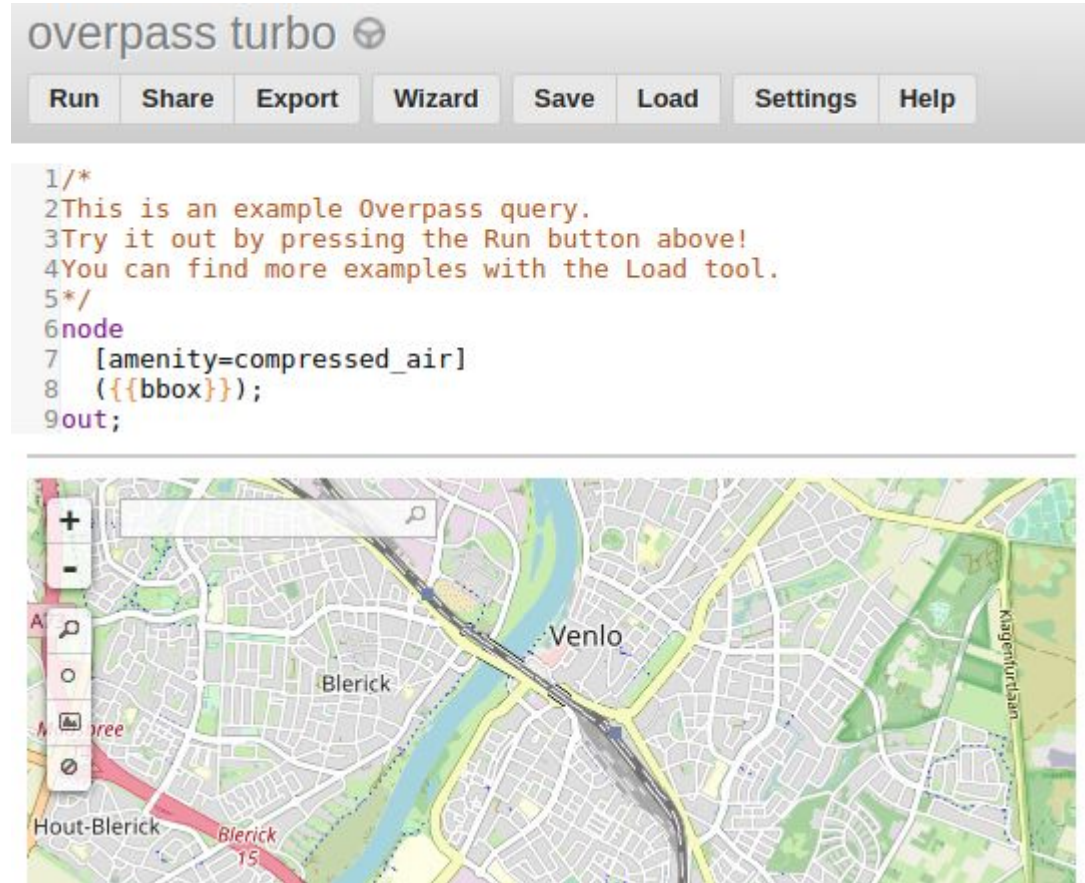
<https://www.forbes.com/sites/bernardmarr/2018/03/05/heres-why-data-is-not-the-new-oil/#5b2ecb5d3aa9>

Discussion, paid or free. Is OSM an option?

<https://wiki.openstreetmap.org/wiki/Planet.osm#Downloading>

<https://overpass-turbo.eu/>

<http://dbpedia.org/sparql>



Use an endpoint and query this:

What is the population of barcelona?

What are the districts of barcelona?

What is the population per district in barcelona?



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