

*Biscuits and Beyond*



<https://geo.houseofmoran.io>



<https://www.houseofmoran.com>



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# Who am I?

- Principal Engineer at Skyscanner
- Started too many side-projects I never finished
- Persistent Geo Amateur
- Why not start a '*single*' Geo project I never finish and call it Art?



← Travaux

< >

## LES VILLES RANGEES

impressions numériques en 3ex sur papier Hahnemülle 310g// 80 cm x 110 cm par plan.



berlin / berlin rangé



<http://www.armellecaron.fr/works/les-villes-rangees/>



*Why*

I wonder if I can do that  
automatically?

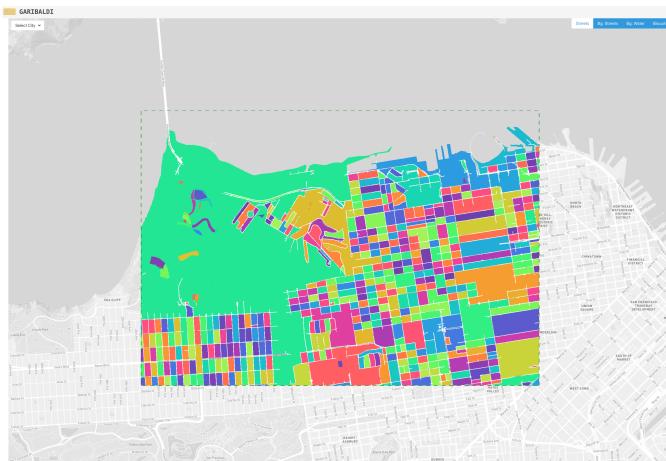


# History



<https://speculaas.houseofmoran.io/>

- 😊 bin-packing auto-layout
- 😊 animated and interactive
- 😞 screenshots static 'maps'



<https://garibaldi.houseofmoran.io/>

- 😊 dynamic maps
- 😊 interactive (runs in browser)
- 😢 pixel-based region-building affected by resolution quirks

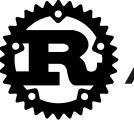


# *History*

Maybe I have to learn  
about GIS after all?

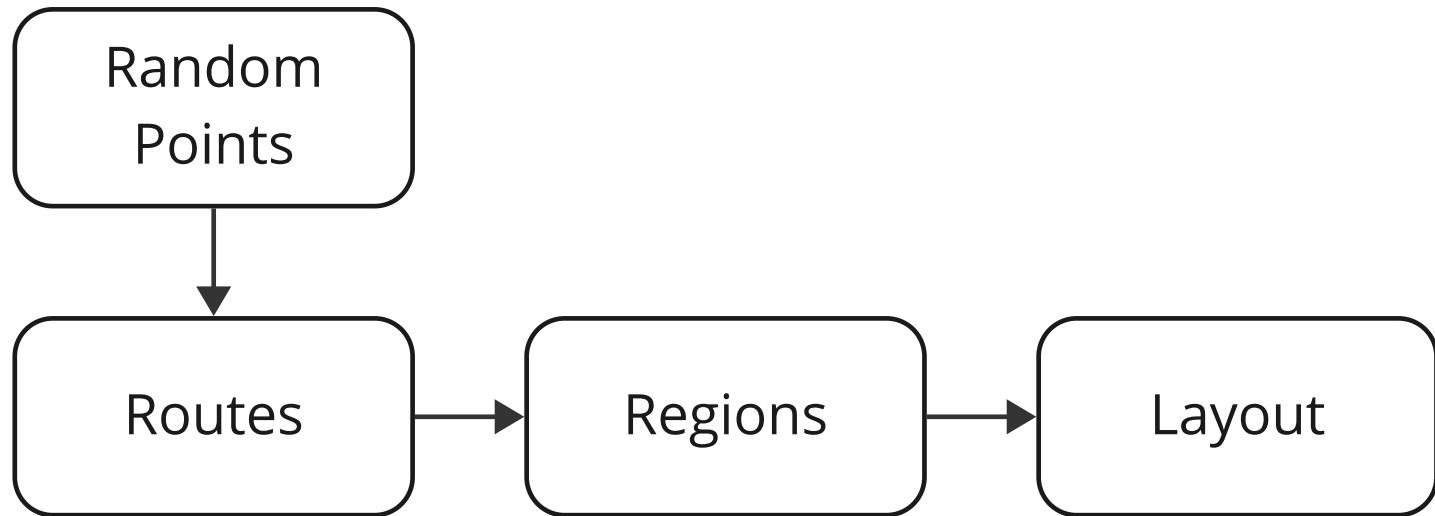


# *History*

(Also, write everything in  /  )

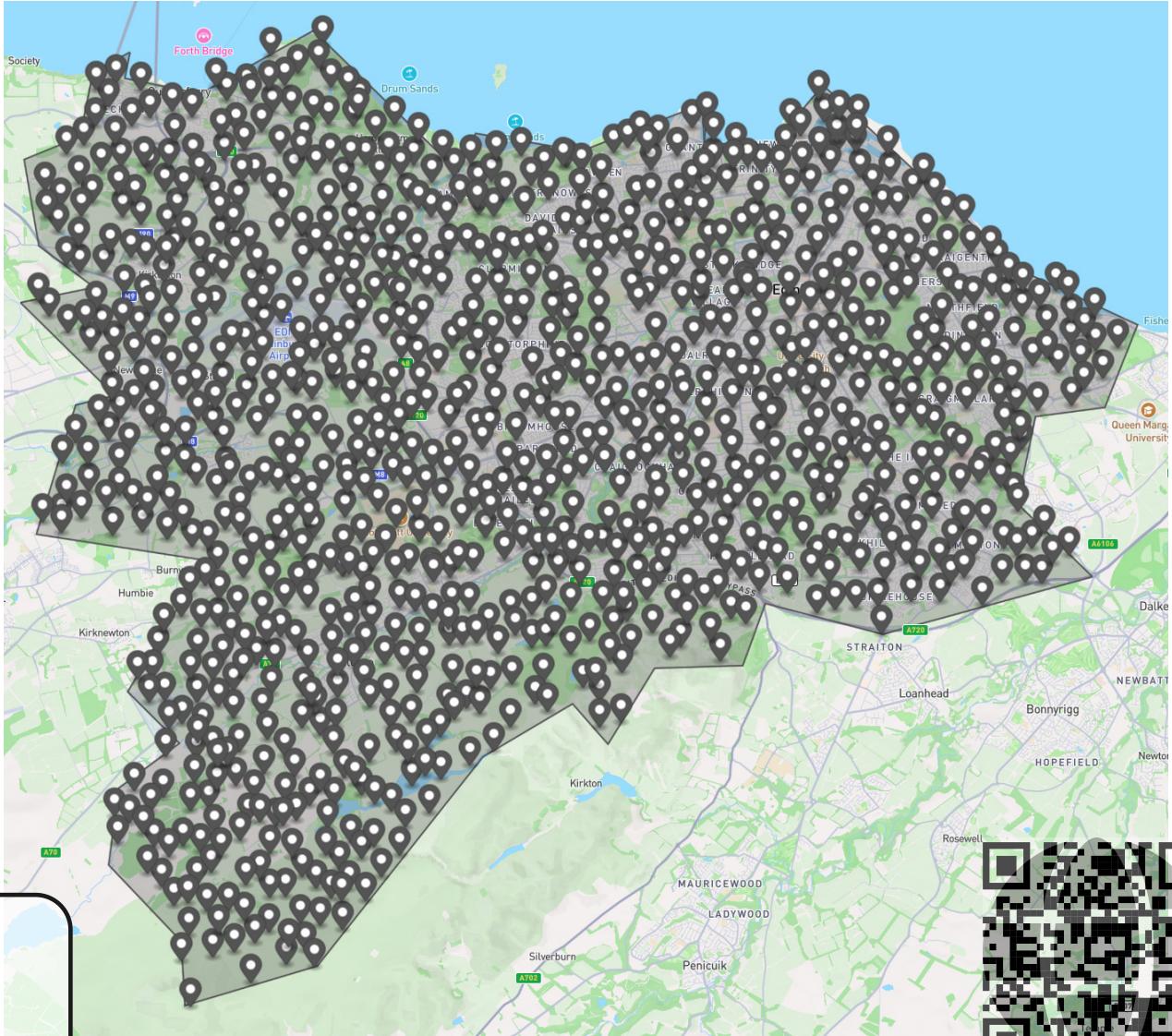


*How*



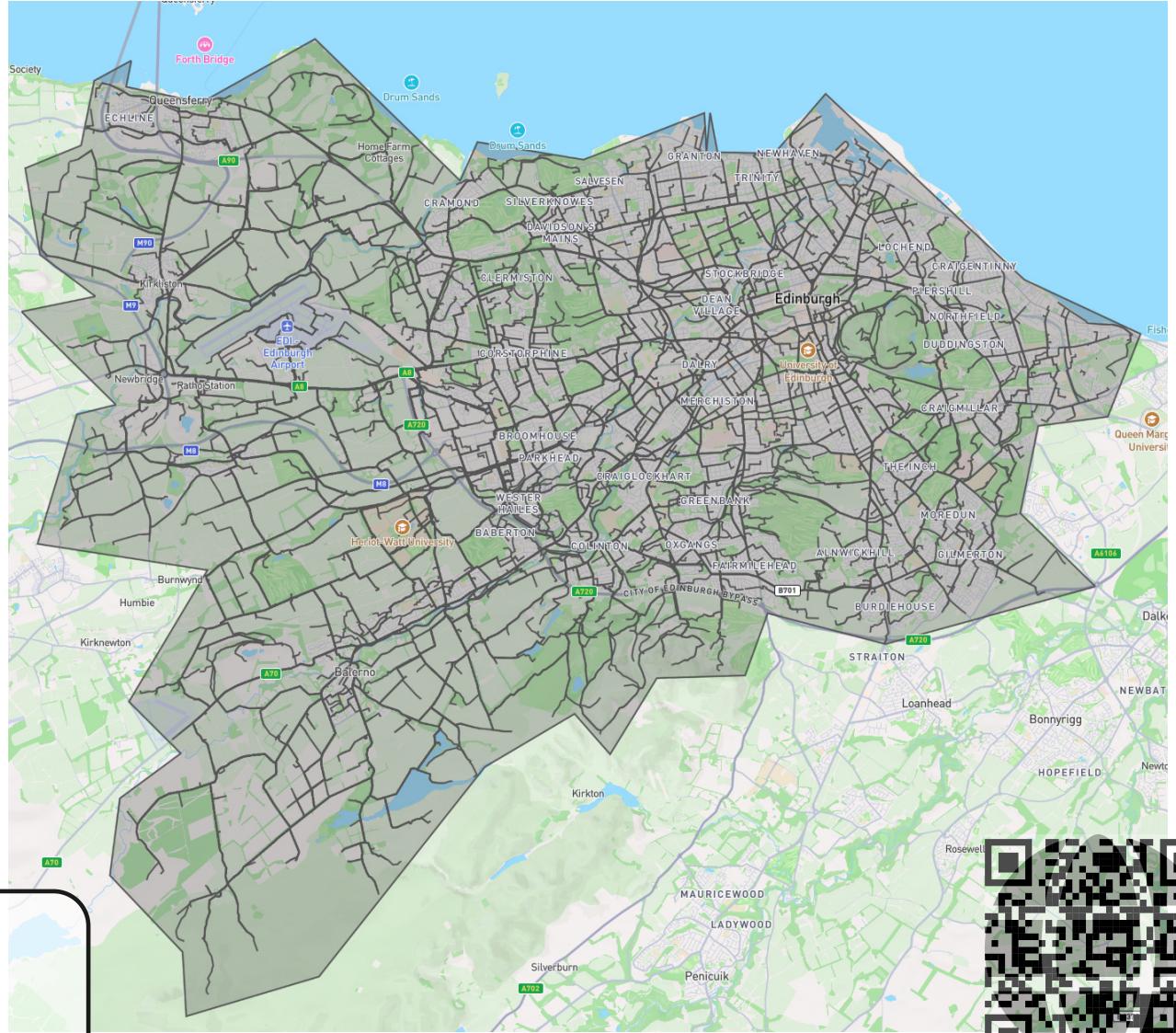
How

Random  
Points



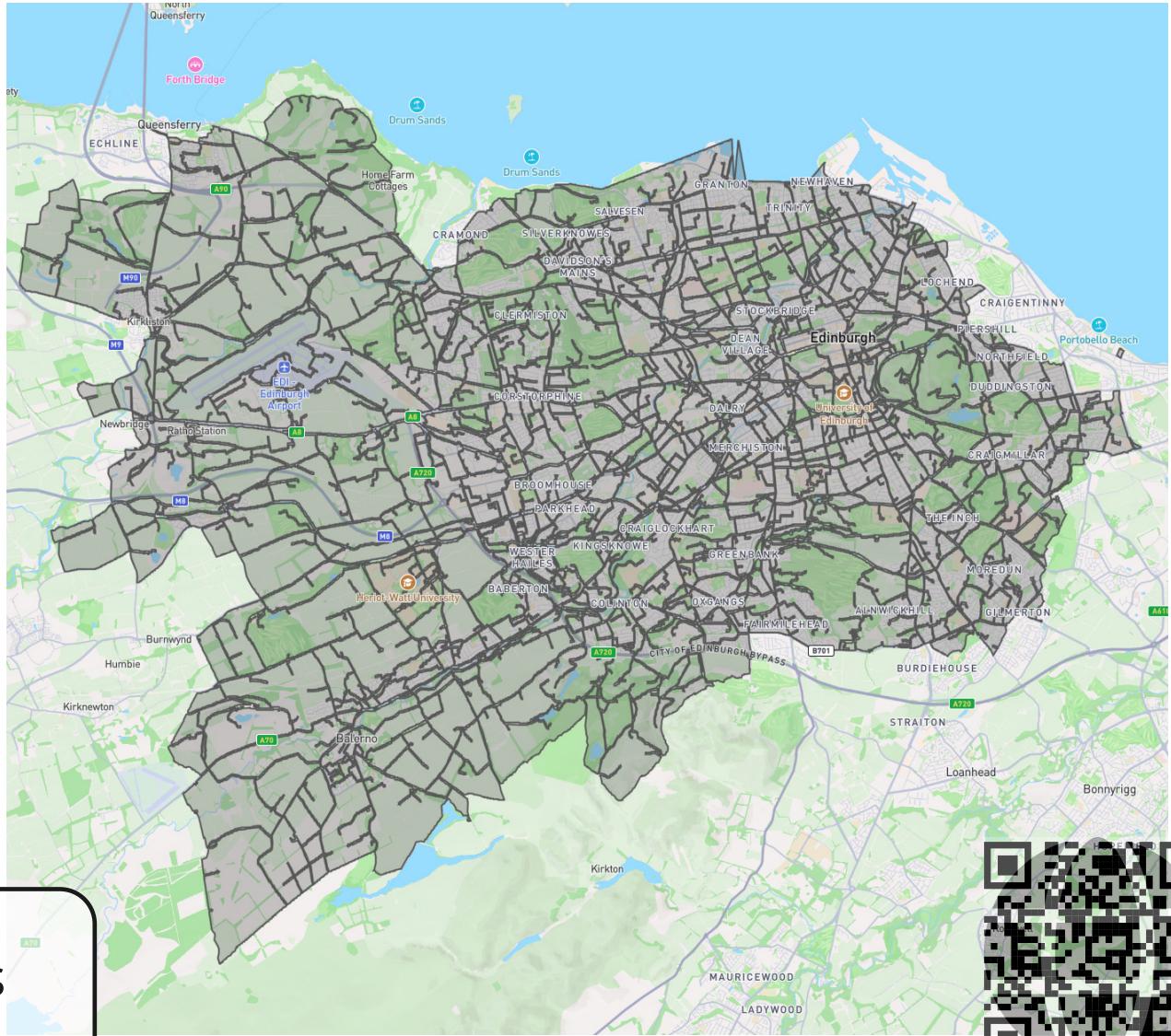
How

Routes



# How

Regions



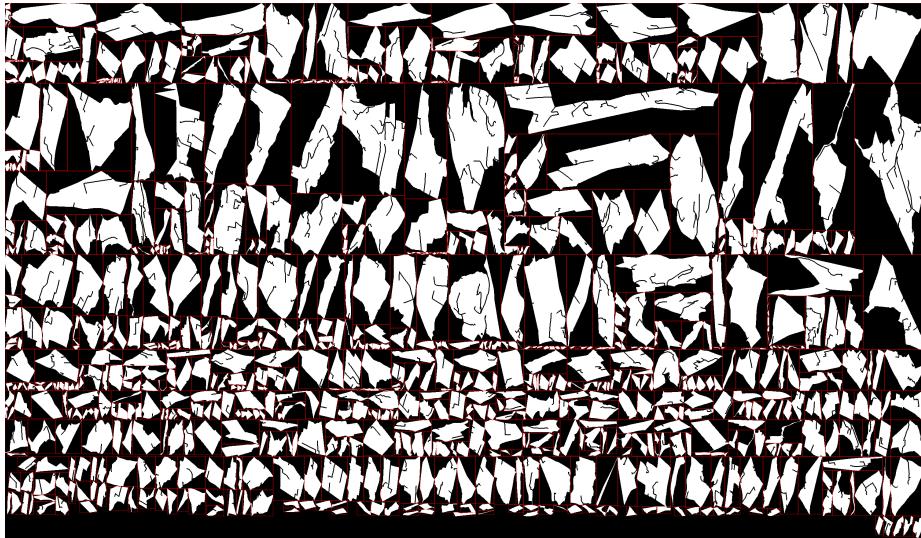
How



Layout



# *History*



[https://github.com/mikemoraned/geo/  
tree/main/apps/linzer](https://github.com/mikemoraned/geo/tree/main/apps/linzer)

- 😊 pedestrian and auto-biased route sources
- 😊 deterministic
- 😊 bin-packing auto-layout



# *History*

Maybe copying ideas from  
Artists isn't so cool anymore?  
(was it ever?)

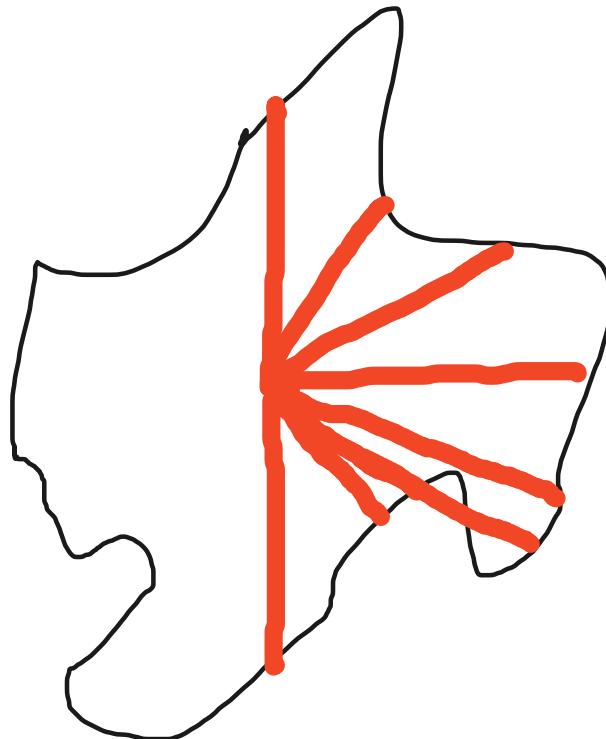
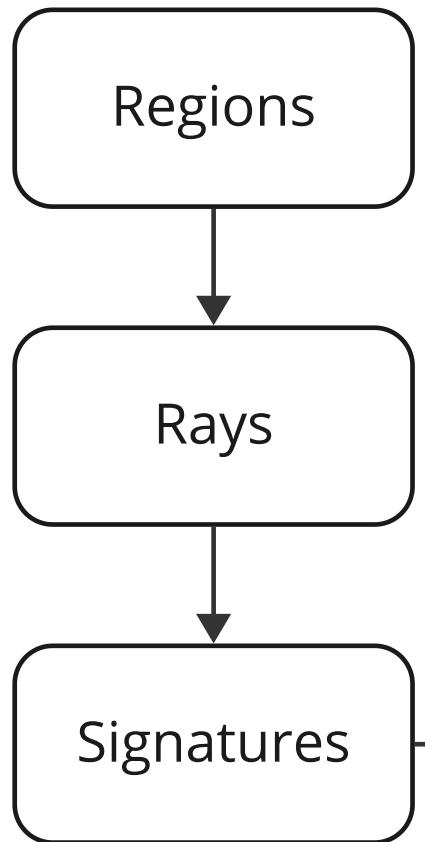


# *History*

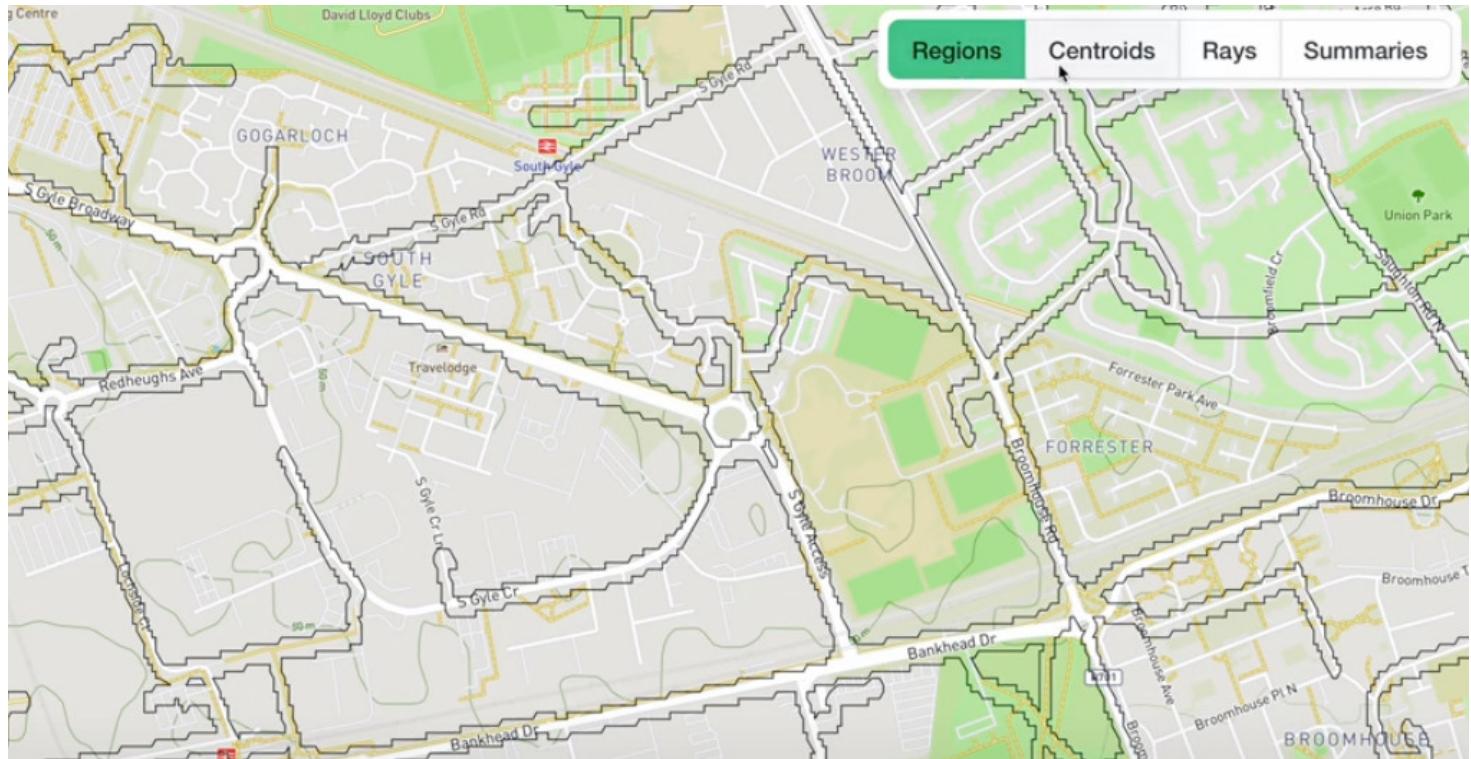
Let's build the foundations  
for fucking about



How



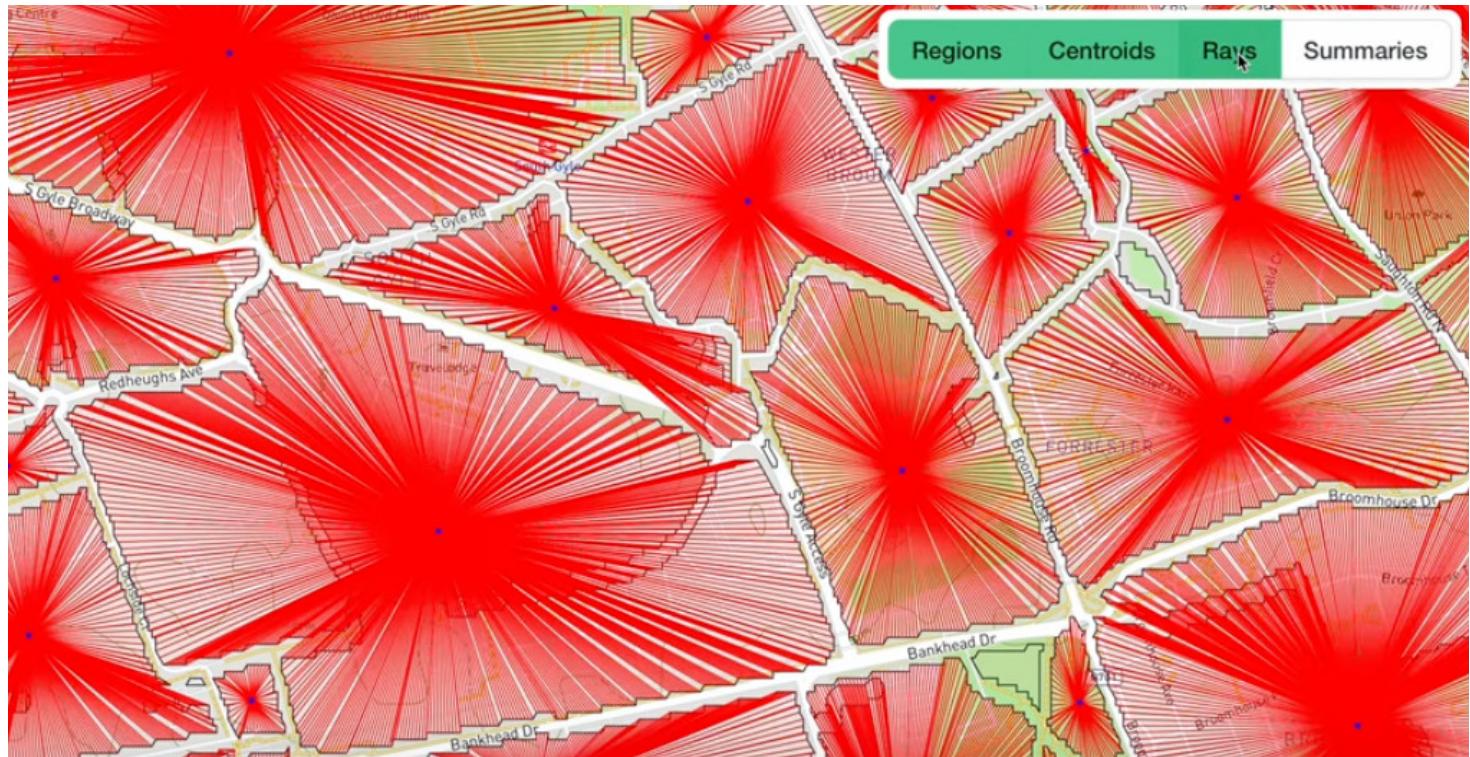
How



Regions



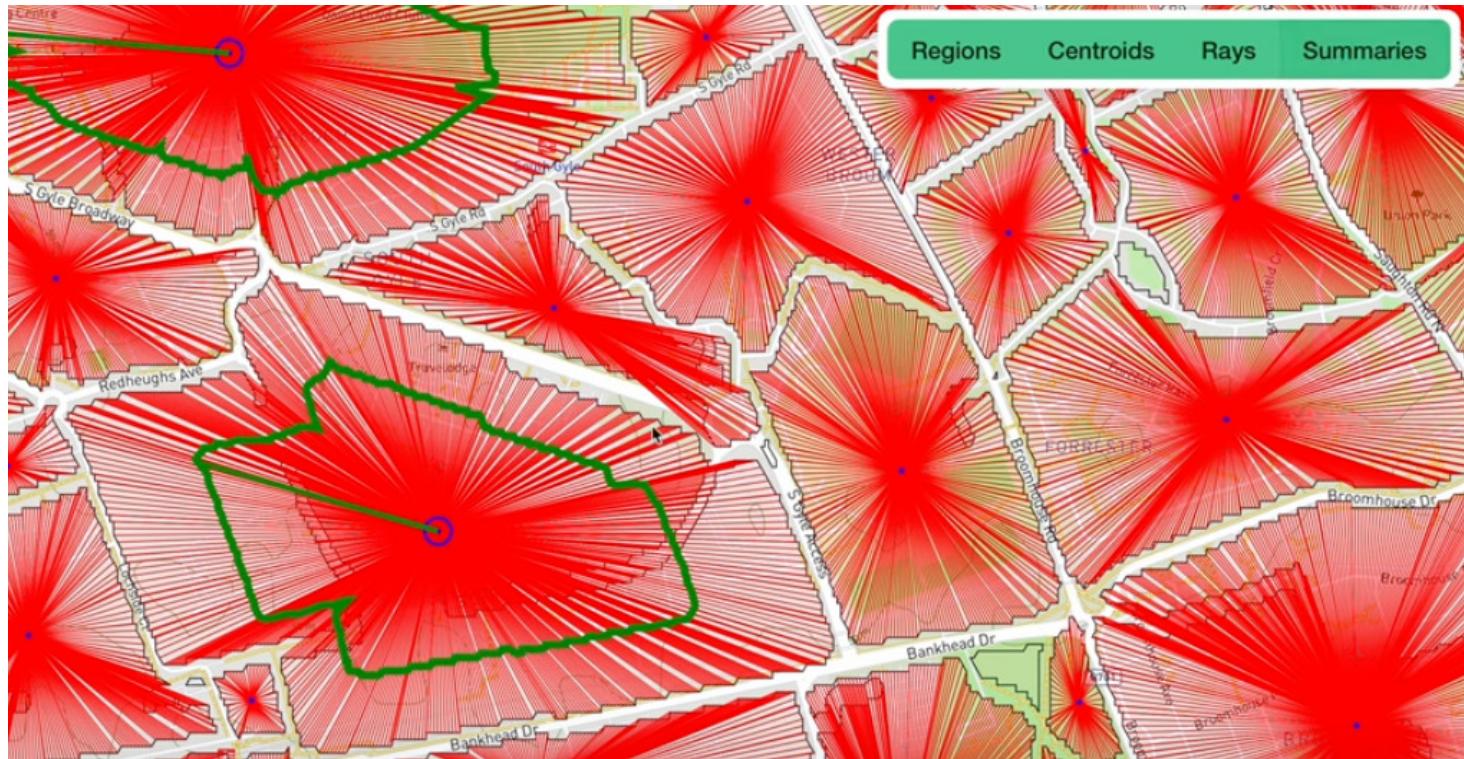
How



Rays



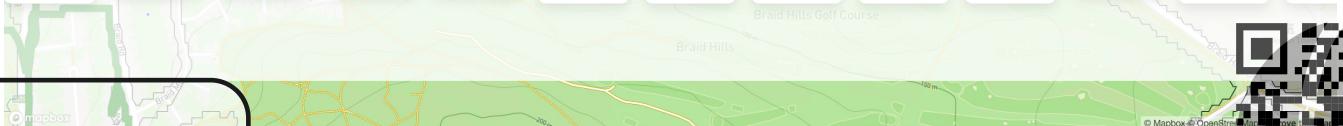
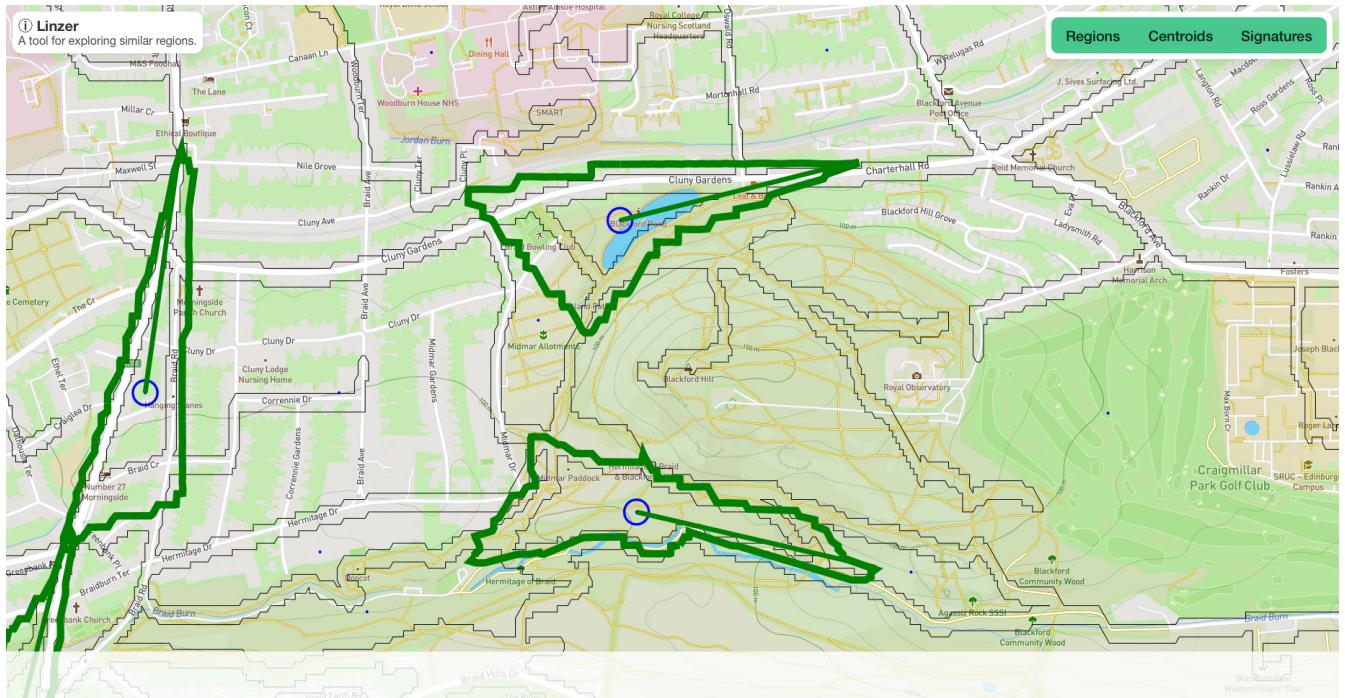
How



Signatures

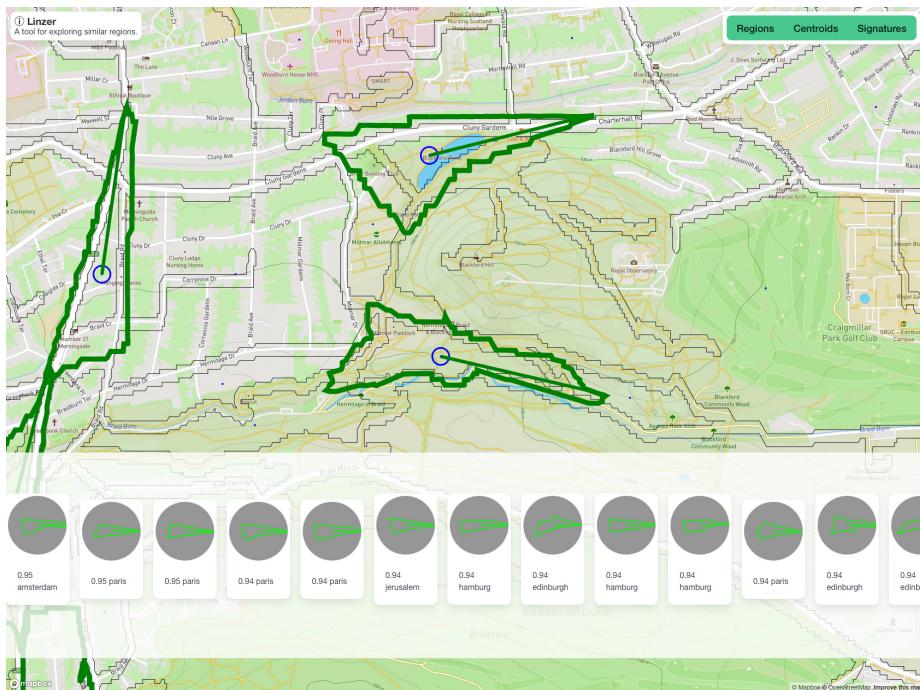


# How



Find Similar

# Now



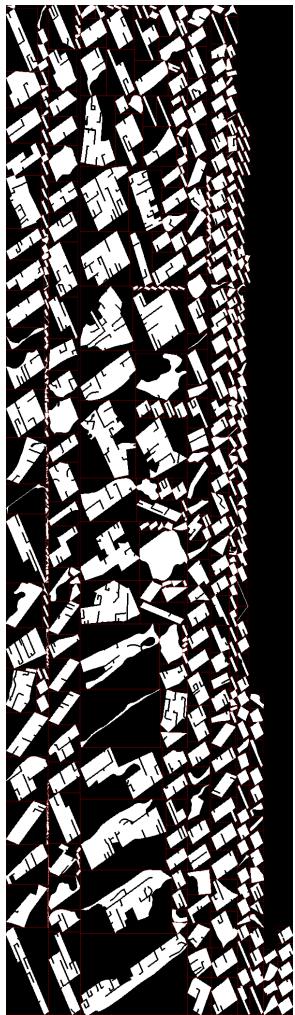
<https://linzer.houseofmoran.io>

- 😊 explore in the browser
- 😊 find similar regions
- 😞 not fully dynamic maps



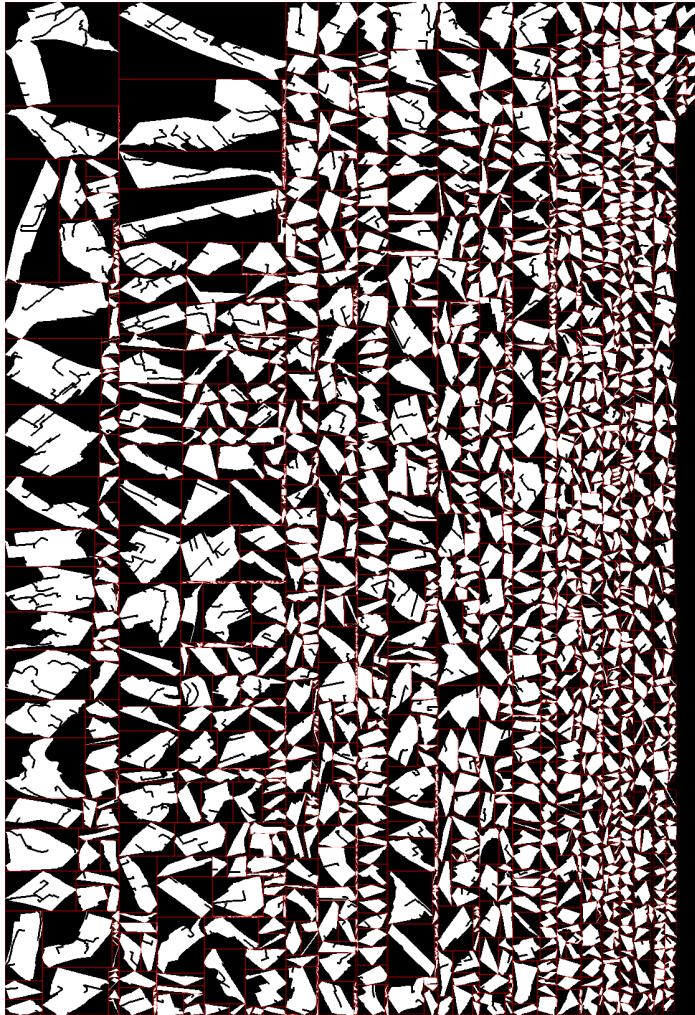
# *Quiz / Questions*

*A:*

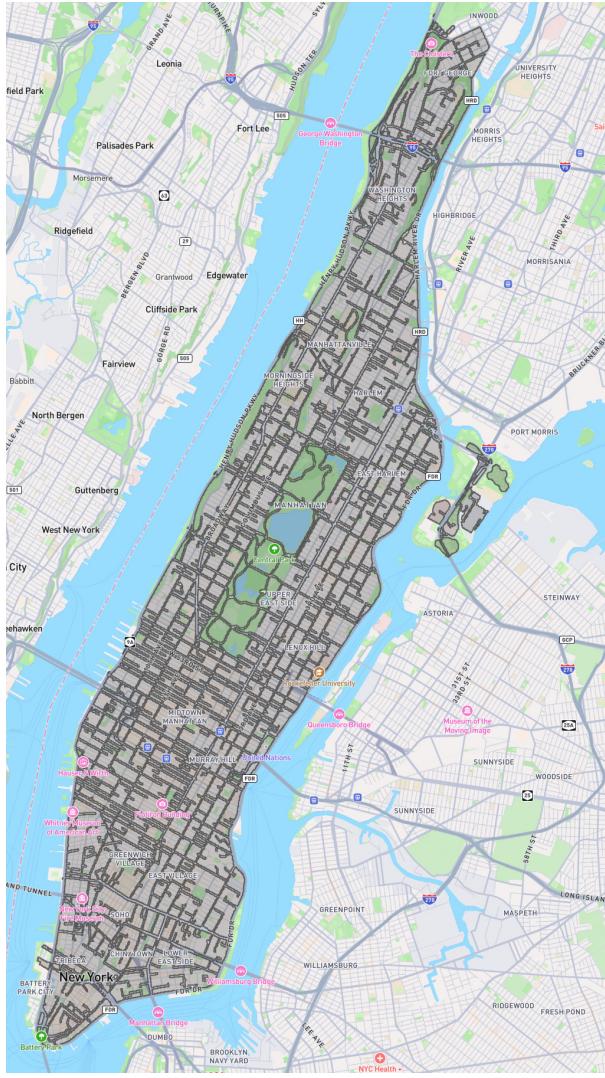


*Which is  
New York  
and  
which is  
Paris?*

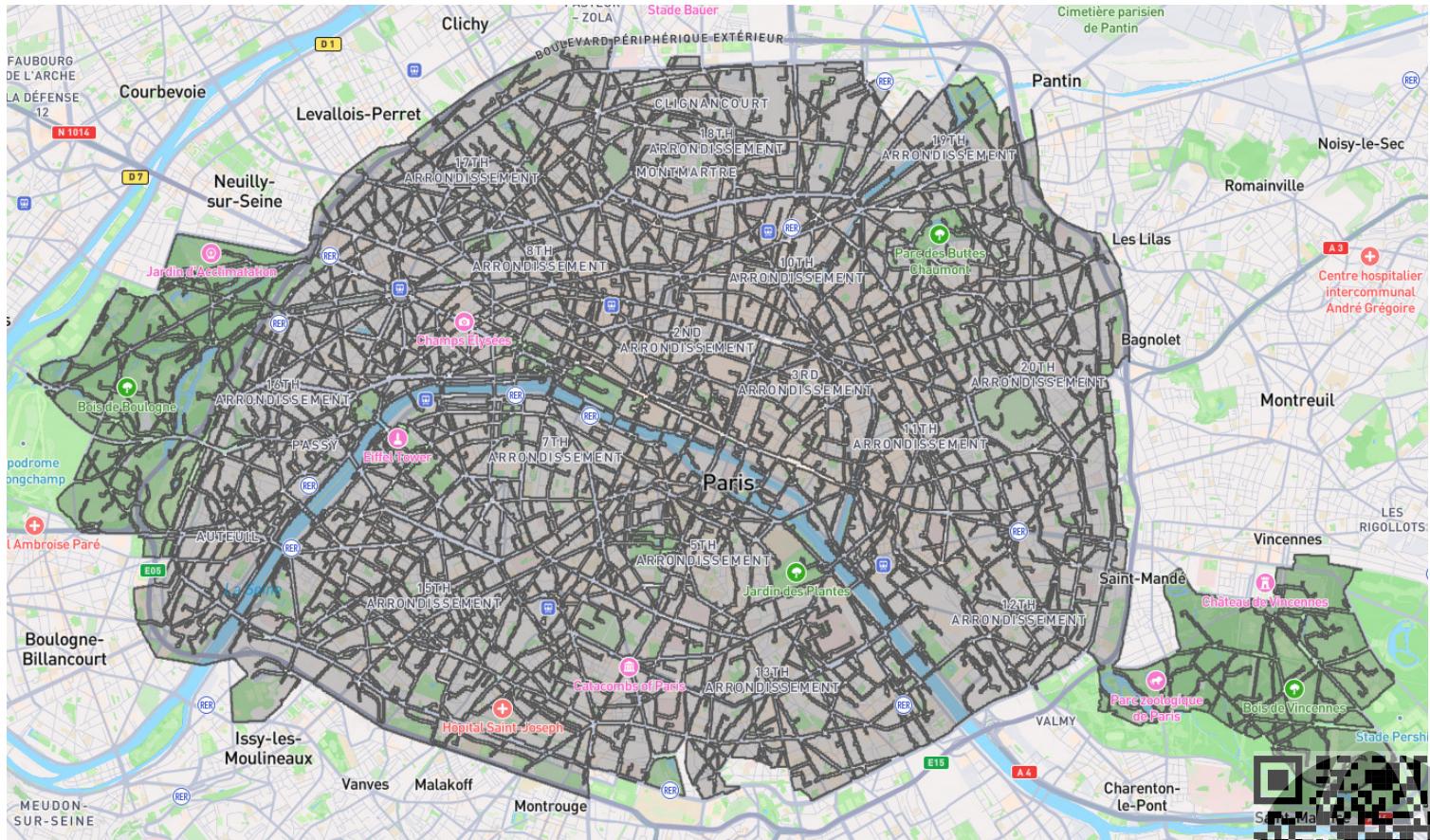
*B:*



# New York Autos



# Paris Pedestrians



# Resources / Useful stuff / Thanks

So many things, but in particular:

geojson.io | powered by Mapbox

A quick, simple tool for creating, viewing, and sharing spatial data.

geojson.io

Debugging



Mapbox | Maps, Navigation, Search, and Data

APIs and SDKs for AI-powered maps, location search, turn-by-turn navigation, and geospatial data in mobile or web apps. Get started for free.

Base Map

Mapbox | Maps, Navigation, Search, and Data

APIs and SDKs for AI-powered maps, location search, turn-by-turn navigation, and geospatial data in mobile or web apps. Get started for free.

Overture Maps Foundation

Home - Overture Foundation

Overture is powering current generation map products by creating reliable, easy-to-use, and interactive open map data. Our data supports developers who build map services using geospatial data.

OpenStreetMap

OpenStreetMap is a map of the world, created by people like you and free to use under an open license.

Route-finding

Stadia Maps

Private, Performant, & Affordable Location APIs

stadiamaps.com

Stadia Maps: Location APIs for humans.

Location APIs for humans: map tiles, static maps, routing, geocoding and search for every app.

duckdb.org

An in-process SQL OLAP database management system

DuckDB is an in-process SQL OLAP database management system. Simple, feature-rich, fast & open source.

georust.org

GeoRust

An ecosystem of geospatial tools and libraries written in Rust. 🚧 Say hello or ask questions on Discord. 🖥 Development occurs on GitHub across per-project repositories. 📖 Check out the book for a lighthearted introduction to Rust and Geospatial. Handlin...

Exploring Geo Datasets

Friendly people!

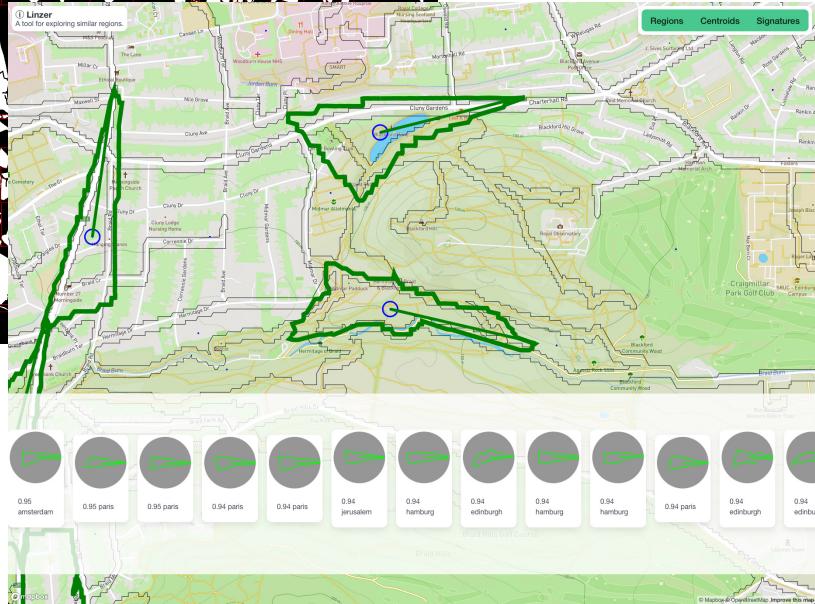
thegeomob.com

Geomob - geoinnovation for fun or profit

Geomob is an event series and podcast for location based service creators and enthusiasts.

EDI: June 24th!





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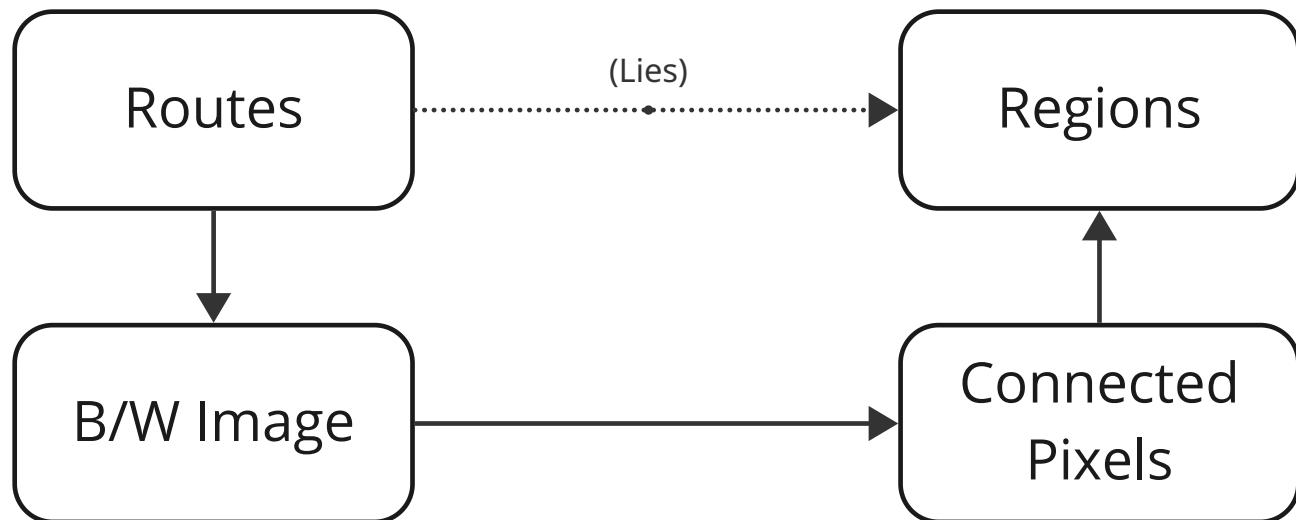


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## *Extra: pixel-based region-building*



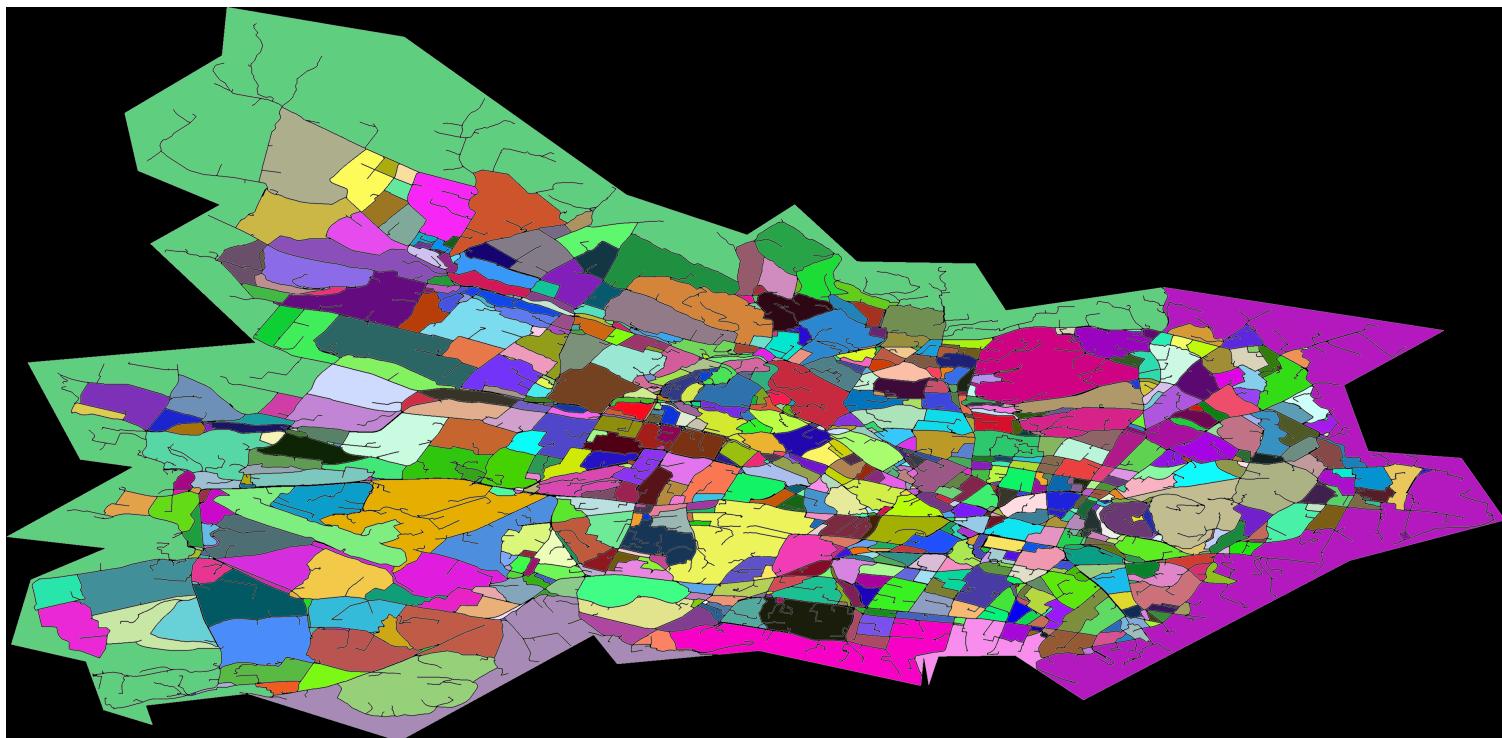
*How*



B/W Image



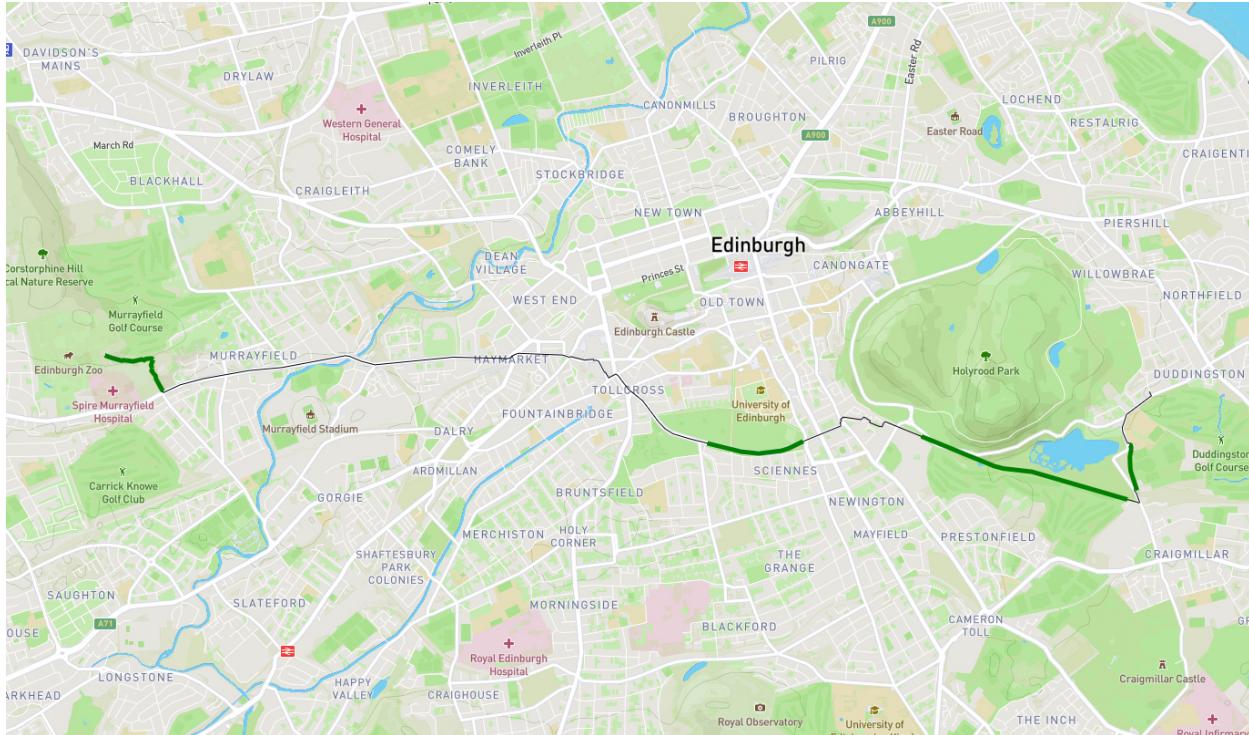
*How*



Connected  
Pixels



# *Extra: Greenery and Water*



<https://spectrum.houseofmoran.io>



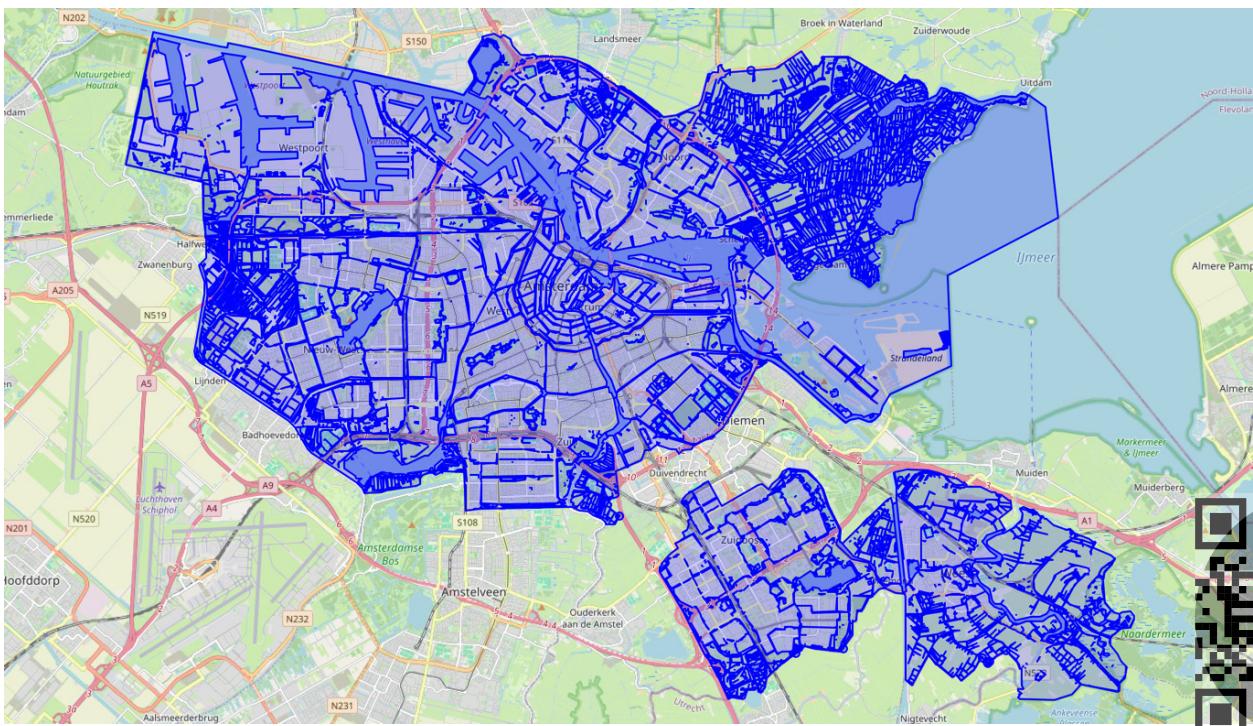
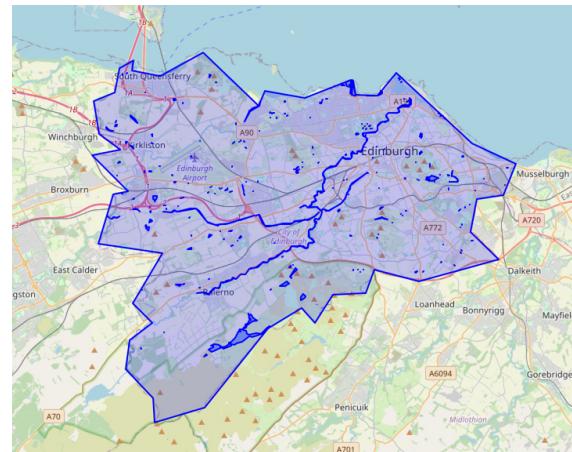
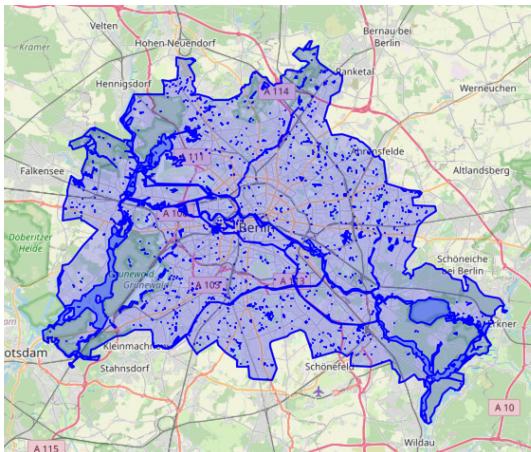
```

WITH city AS (
    SELECT geometry
    FROM division_area
    WHERE
        -- id = '0851d7537fffffffff015d4f9f0d8b31e6' -- Berlin
        -- id = '085ba2a9bfffffff01a888f06236016b' -- Edinburgh
        id = '0850a811bfffffff010c628b3d6d6ee3' -- Amsterdam
),
bbox AS (
    SELECT
        ST_XMin(env) AS xmin,
        ST_YMin(env) AS ymin,
        ST_XMax(env) AS xmax,
        ST_YMax(env) AS ymax
    FROM (
        SELECT ST_Envelope(geometry) AS env
        FROM city
    )
),
unioned AS (
    SELECT geometry
    FROM city
    UNION ALL
    SELECT ST_Union_Agg(w.geometry) AS geometry
    FROM base_water AS w
    CROSS JOIN bbox AS bb
    WHERE ST_GeometryType(w.geometry) IN ('POLYGON',
                                           'MULTIPOLYGON')
        AND (w.bbox).xmin > bb.xmin
        AND (w.bbox).ymin > bb.ymin
        AND (w.bbox).xmax < bb.xmax
        AND (w.bbox).ymax < bb.ymax
),
intersection AS (
    SELECT ST_Intersection_Agg(geometry) AS geometry
    FROM unioned
)
SELECT geometry, ST_Area(geometry) AS area
FROM intersection
UNION ALL
SELECT geometry, ST_Area(geometry) AS area
FROM city

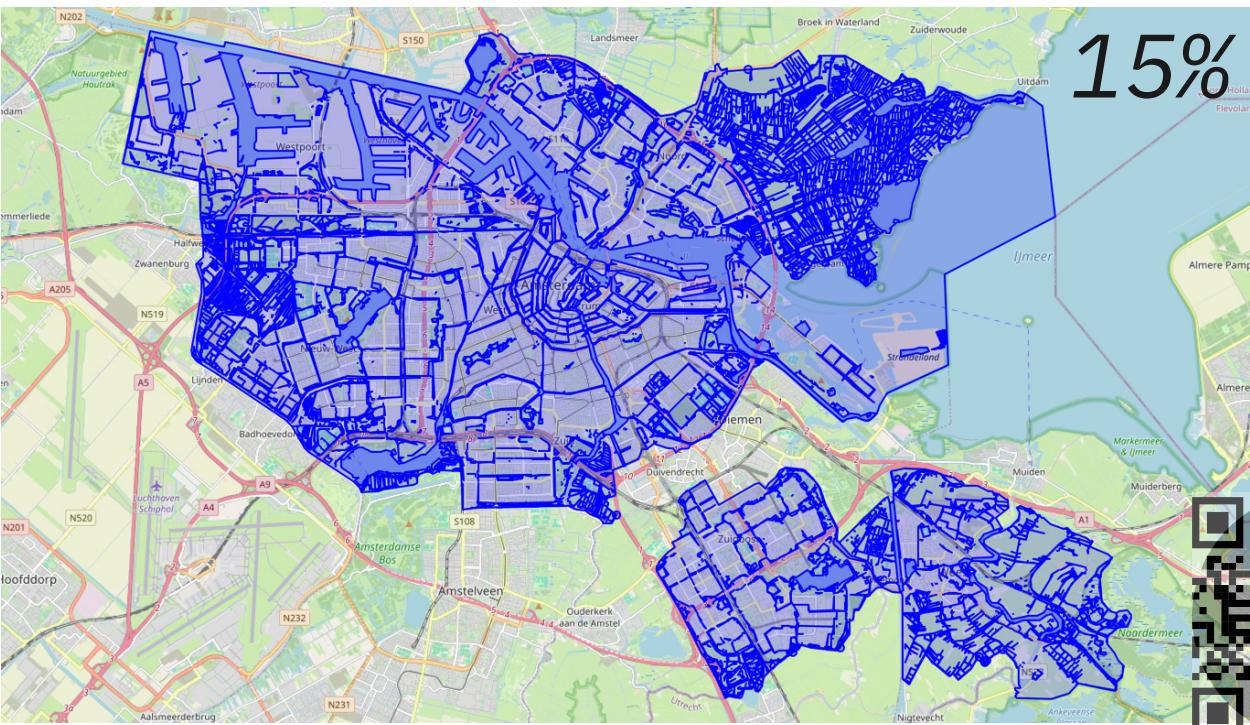
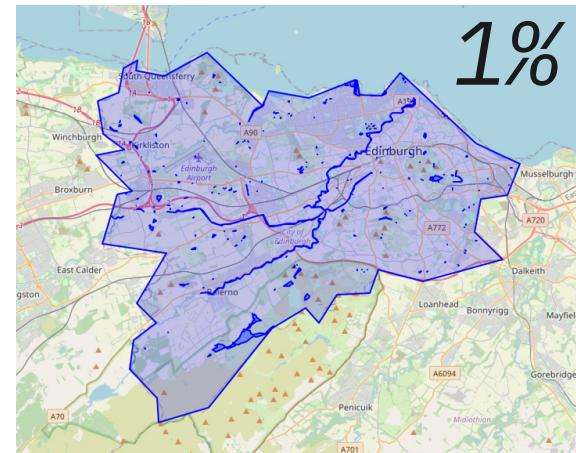
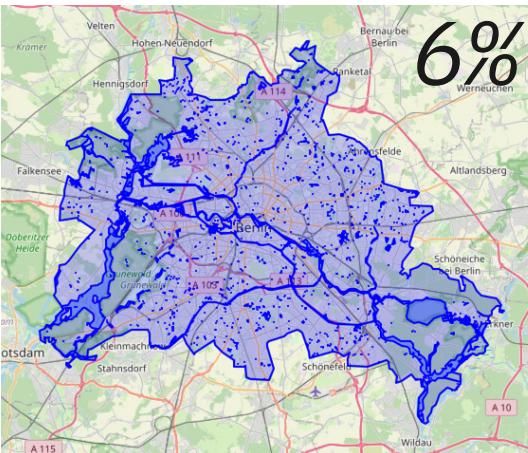
```

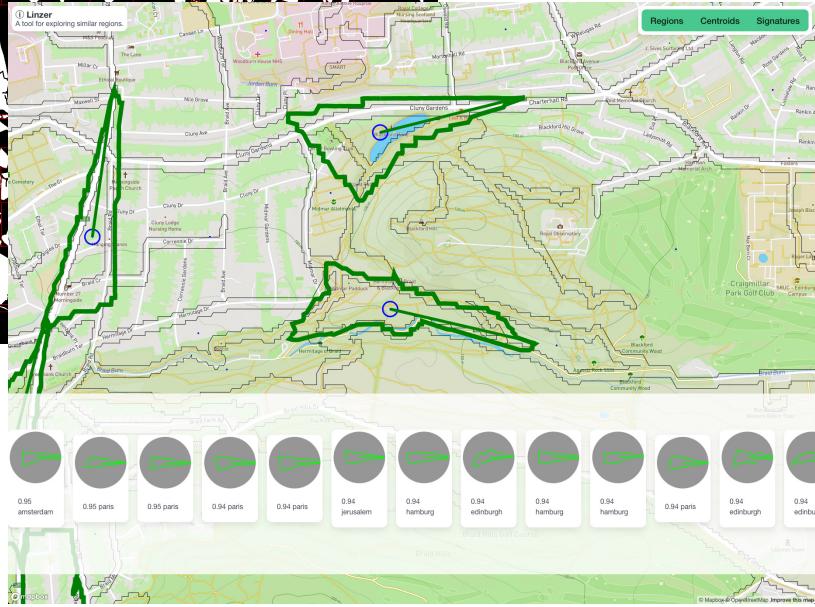


# Quiz



# Quiz





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