



How Can We Data Mine + NLP Our Way to Unique Location Insights?

Outline

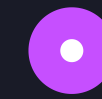
- Please ask questions throughout via chat
 - If directly relevant, I will try and touch on it
 - Otherwise, will address them at the end
- Slides, datasets & code available here:

<http://bit.ly/GISMOBasil>



01

ABOUT ME



02

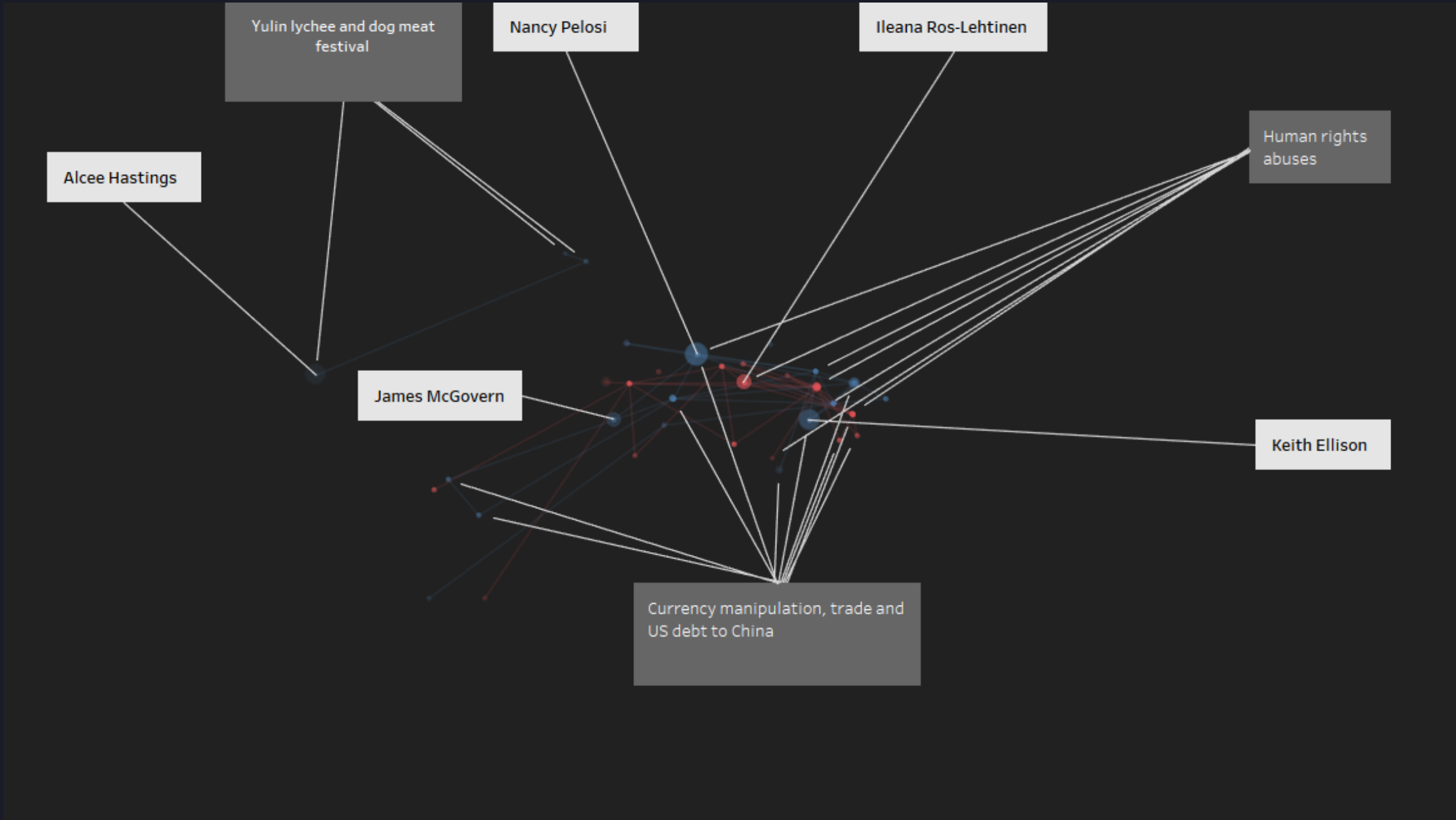
BASIL LABS SOLUTIONS



03

DIVE INTO DATA, MAPPING,
CODE

About me



Narrative analysis of surveys from scientists in the AP region

High-Correlation Clusters of Congressional members (2018) & Twitter statements about China

4	GROUP						
5		ACTION IN A-P REGION TO STRENGTHEN RESPONSIBLE SCIENCE POLICIES & REGULATIONS	KEY WORDS & PHRASES	CATEGORY(IES)	INDIVIDUAL ACTION TO EFFECTIVELY IMPLEMENT	KEY WORDS & PHRASES	CATEGORY(IES)
6		standardization and harmonization of guidelines and regulations			comply with standards		
7		formation of regional "group"/association for responsible science in connection with international groups			influencing national regulator; institute the policy at institutional level on a voluntary basis		

About me



Ableton Live

medium.com/@theo-goe

Medium

Your stories

Drafts 1 Published 17 Responses 4

A Bored Mind Is a Good Mind: A Guide to Learning by Doing

It is hard to fail, but it is worse never to have tried to succeed. Get on the #StruggleBus—

★ Published on Feb 9 · 9 min read · In Age of Awareness ▾

Crowd Estimates at the Capitol Riot Using PyTorch and Streamlit

Although experts have said that without any aerial photos of the riot, it is difficult to esti

★ Published on Jan 14 · 5 min read · In Analytics Vidhya ▾

How Far Can COVID Spread From the Airport Because of the Holidays?

How far will COVID travel this holiday season? It's a legitimate question and it has exper

★ Published on Dec 30, 2020 · 5 min read · In Power in Numbers ▾

3 Steps to Successfully Completing Your First Coding Project

3 steps to get that feeling of exhilaration when you finish a project. This approach relies

Published on Dec 30, 2020 · 9 min read · In JavaScript in Plain English ▾

Where people go & what they value



Catalyst

Built with  AREA PROBE

AI-powered cameras that count pedestrians, vehicles, and other objects to provide security alongside accurate metrics.

» [Click here to learn more.](#)



Ella

A voice note survey platform built to encourage open-ended responses and save hours in analyzing responses.

» [Click here to learn more.](#)

As a local small business owner, what have been the biggest challenges you've faced this year?



START

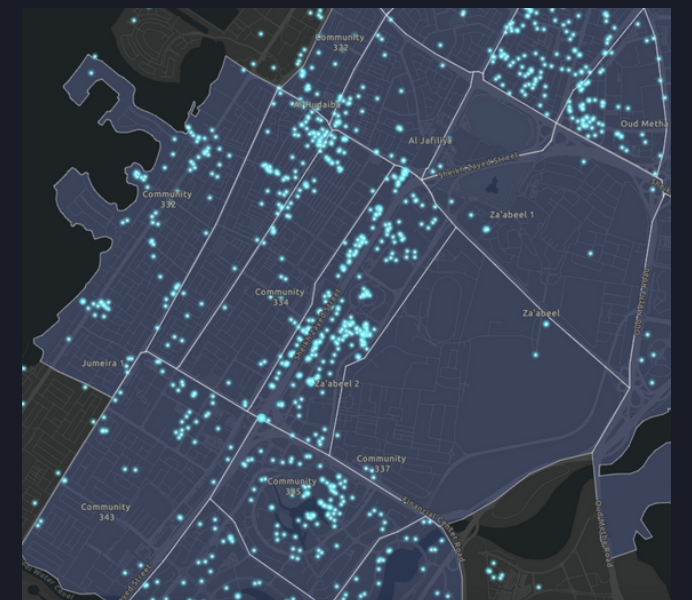
STOP

Question: 1 of 1

BasilCX

Concise dashboards powered by public data and AI to answer your consumer intelligence questions about retail and public spaces.

» [Click here to learn more.](#)







AREAPROBE
basillabs

CATALYST REOPENING INITIATIVE

Running May 1 - July 1, 2021

Analyze 5 hours of footage 100% (free 😊).

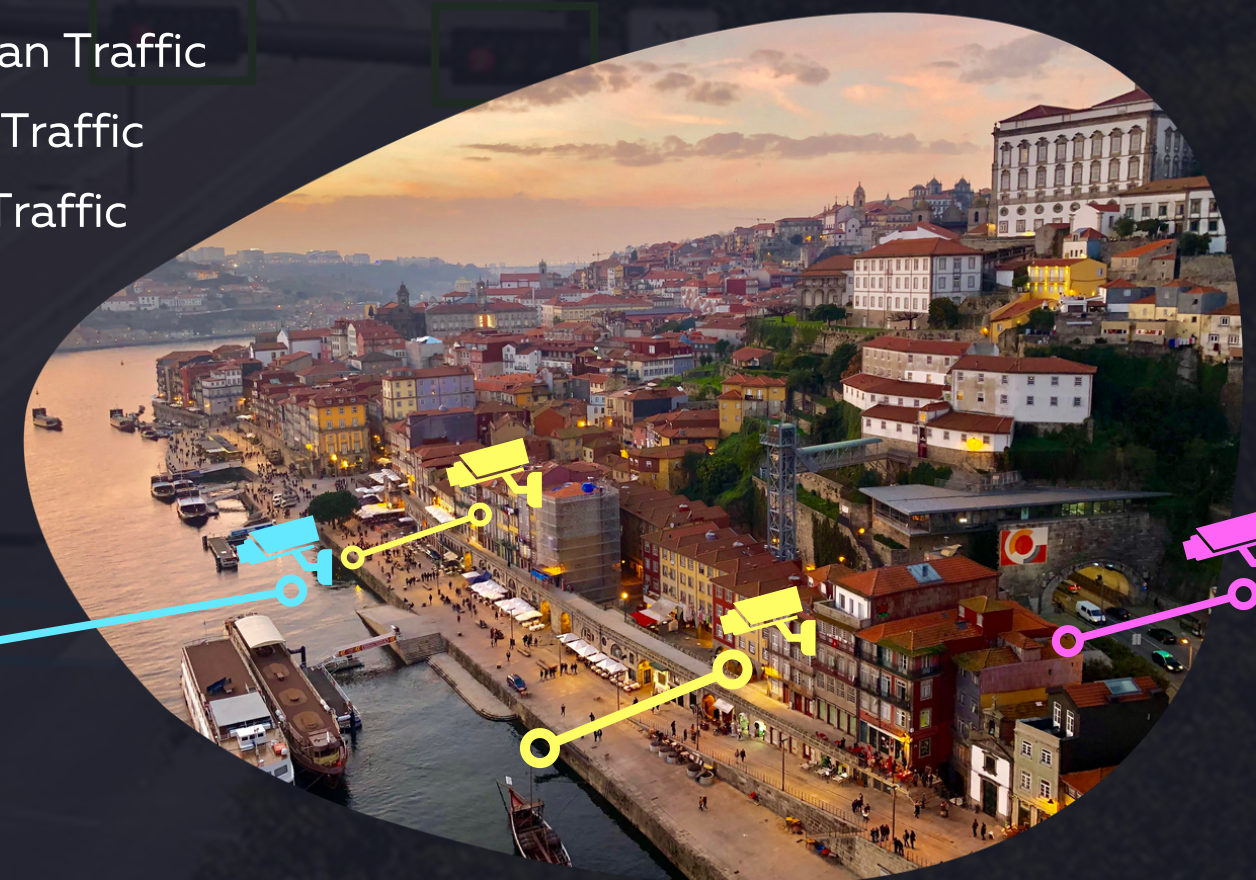
Reach out and let us know what you're trying to track (cars, bikes, people, dogs, etc) or for questions about setting up a Catalyst device for 24/7 tracking.

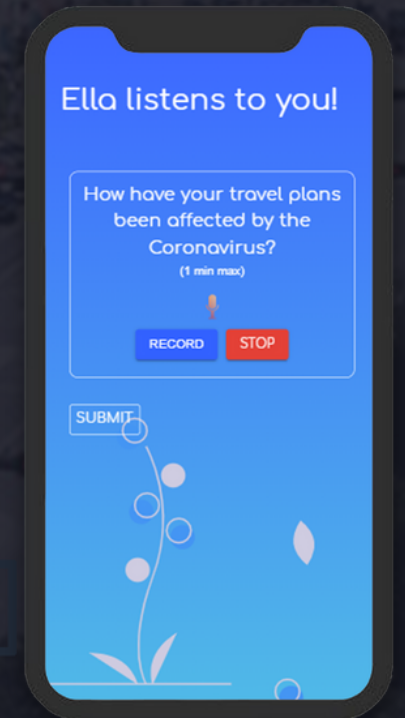
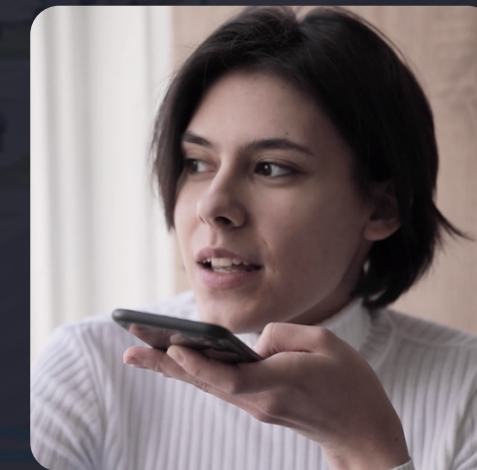
■ Pedestrian Traffic

■ Boating Traffic

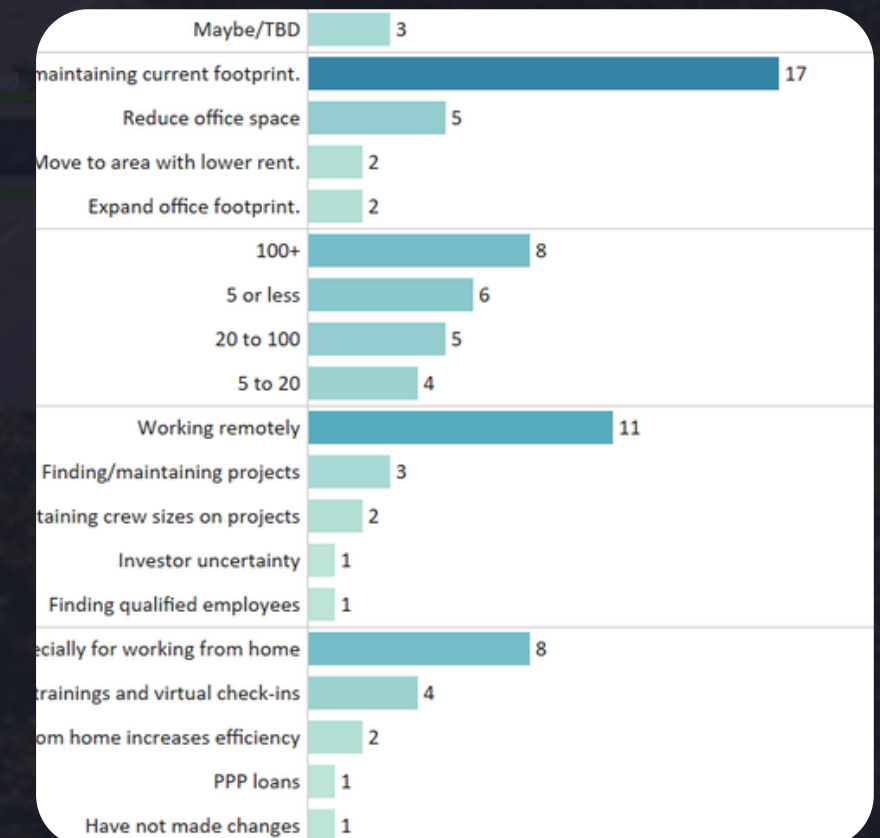
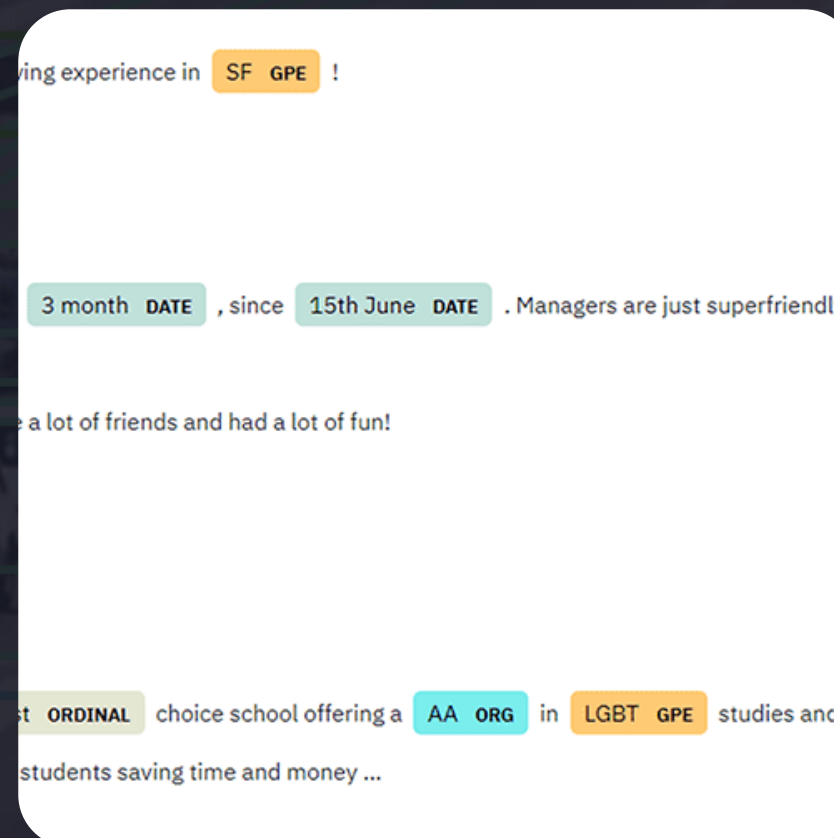
■ Vehicle Traffic

eddie@areaprobe.com
cleatham@areaprobe.com
theo@basillabs.org



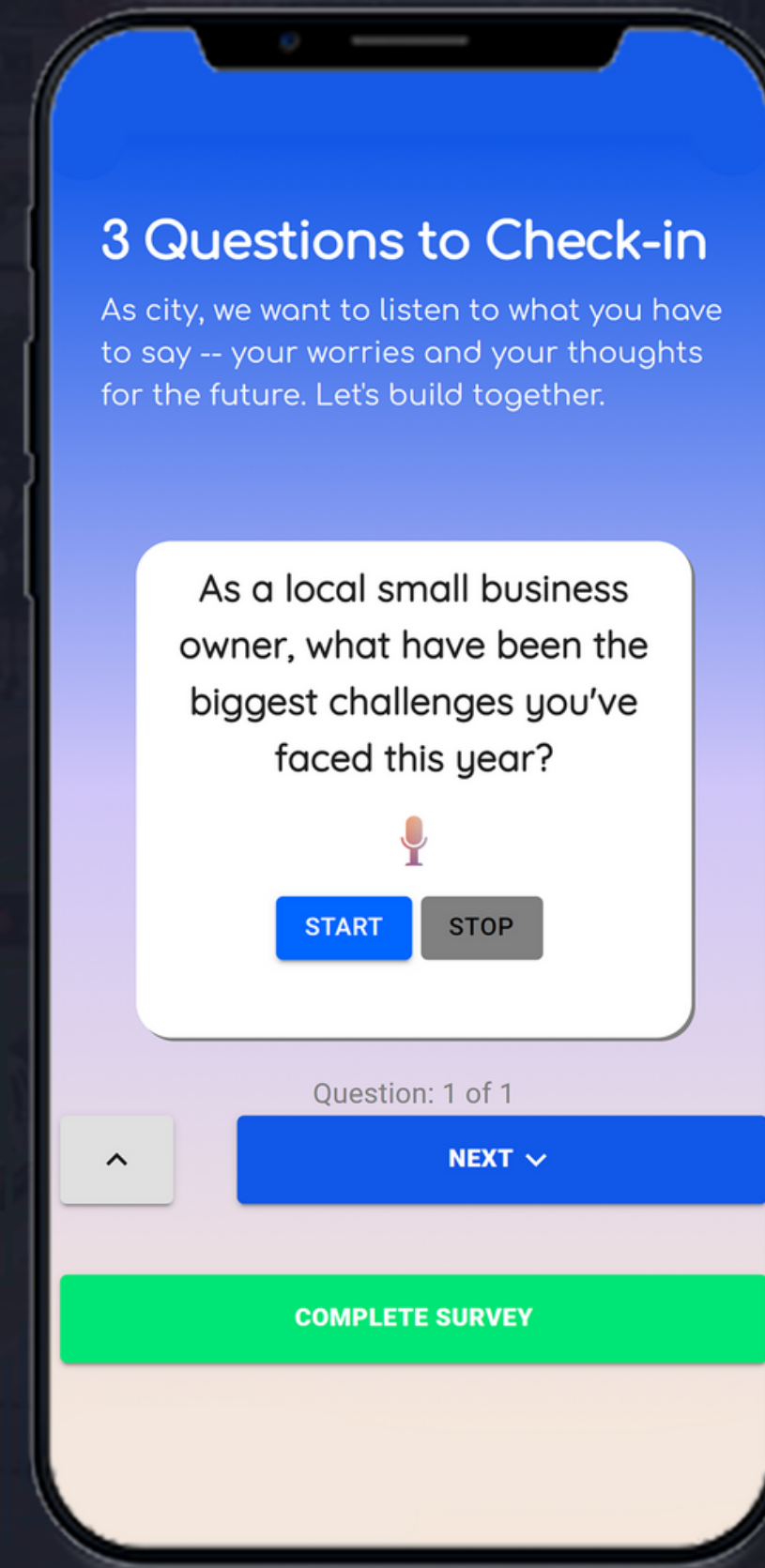


A voice note survey platform built to encourage open responses & save hours of analysis.



RESIDENT & RETAILER SURVEY PROGRAM

Free access to an unlimited response **voice note survey** to understand the challenges, worries and wins of your **local residents & retailers.**

A smartphone mockup displaying a survey interface. The screen has a blue header with the title '3 Questions to Check-in' and a subtitle 'As city, we want to listen to what you have to say -- your worries and your thoughts for the future. Let's build together.' Below this is a white box containing the question 'As a local small business owner, what have been the biggest challenges you've faced this year?' and a microphone icon. At the bottom of the white box are 'START' and 'STOP' buttons. Below the white box is a blue bar with 'NEXT >' and a small upward arrow button to its left. At the very bottom is a green bar with 'COMPLETE SURVEY'.

3 Questions to Check-in

As city, we want to listen to what you have to say -- your worries and your thoughts for the future. Let's build together.

As a local small business owner, what have been the biggest challenges you've faced this year?

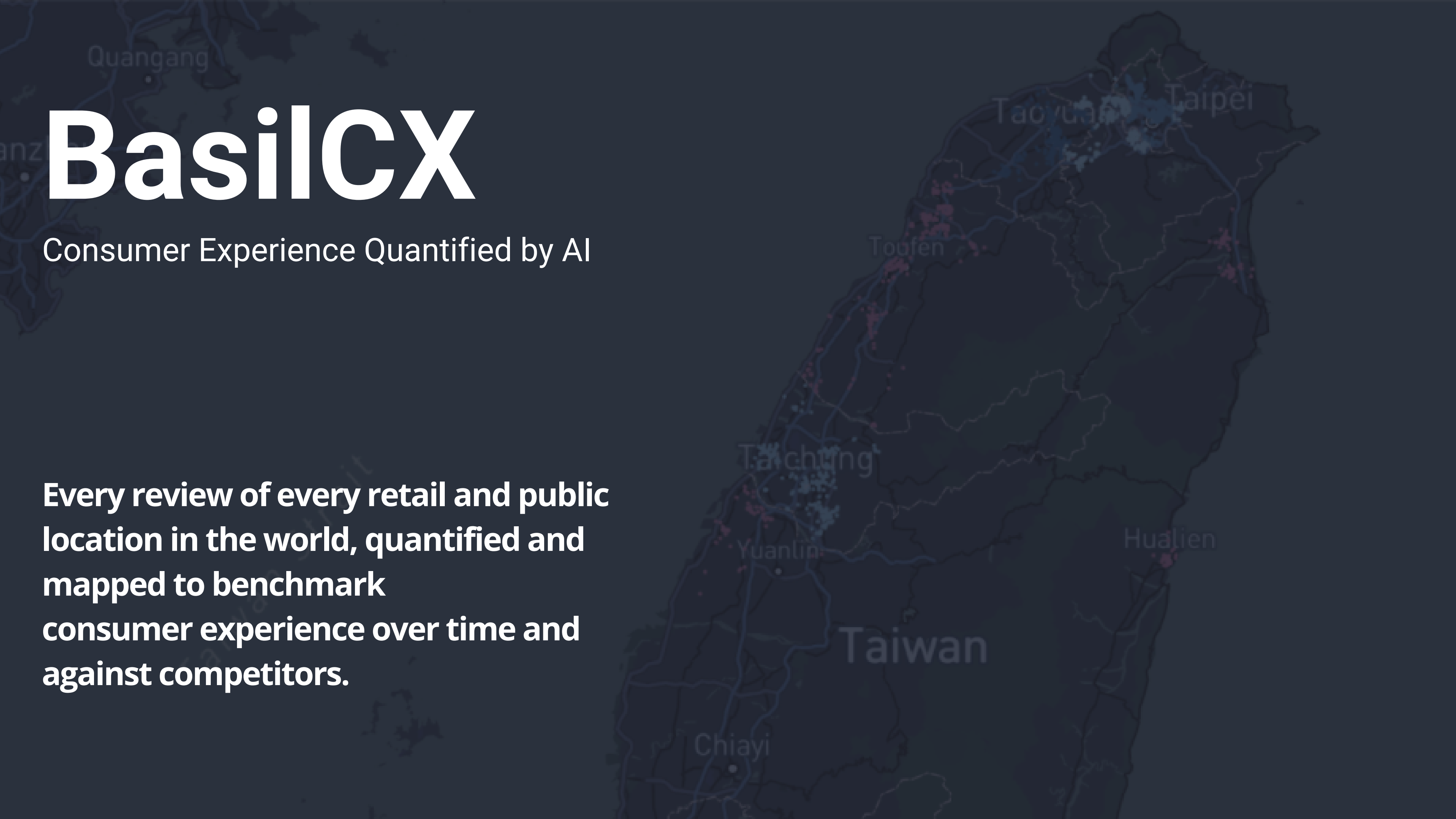
START STOP

Question: 1 of 1

^ NEXT >

COMPLETE SURVEY





BasilCX

Consumer Experience Quantified by AI

Every review of every retail and public location in the world, quantified and mapped to benchmark consumer experience over time and against competitors.

How BasilCX Works



Google Maps



Tripadvisor

zomato



大众点评



airbnb

Family +0.0

Atmosphere +1.0

Price -1.0

"I have been using this library with my son and we love the vibe of this place. One of the best neighborhood libraries I've seen -- even though the prices are a bit high, the cafe in here has incredibly tasty coffee, staff that'll help in a heartbeat and huge windows (so lots of light). The only thing this place needs to work on is parking -- way too expensive and always full..

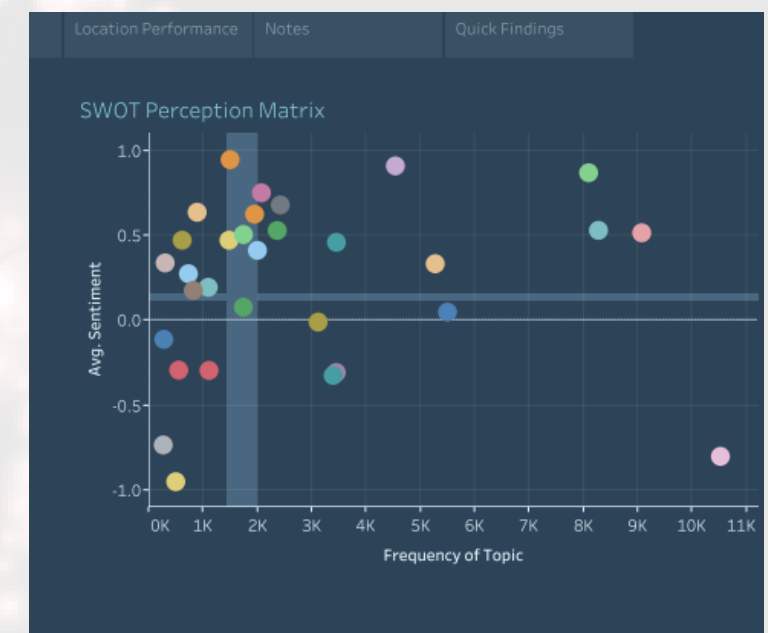
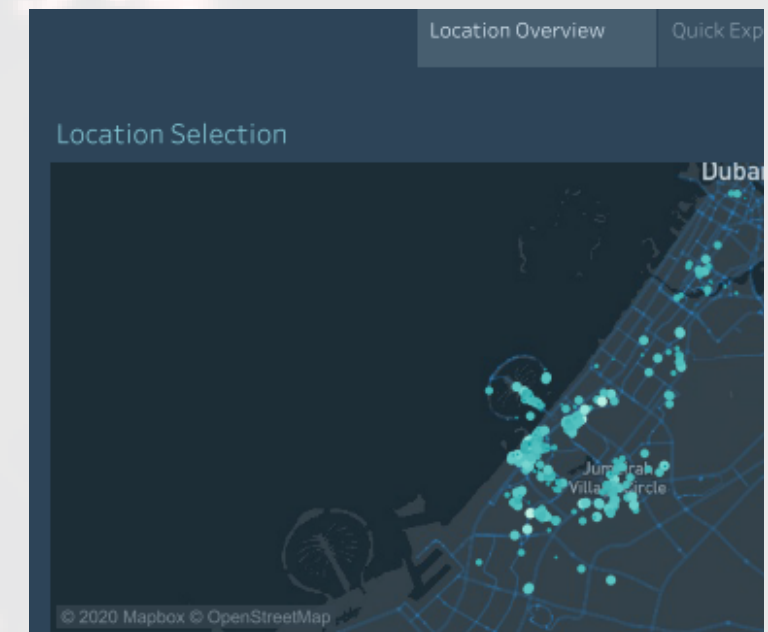
Offerings+1.0

Layout +1.0

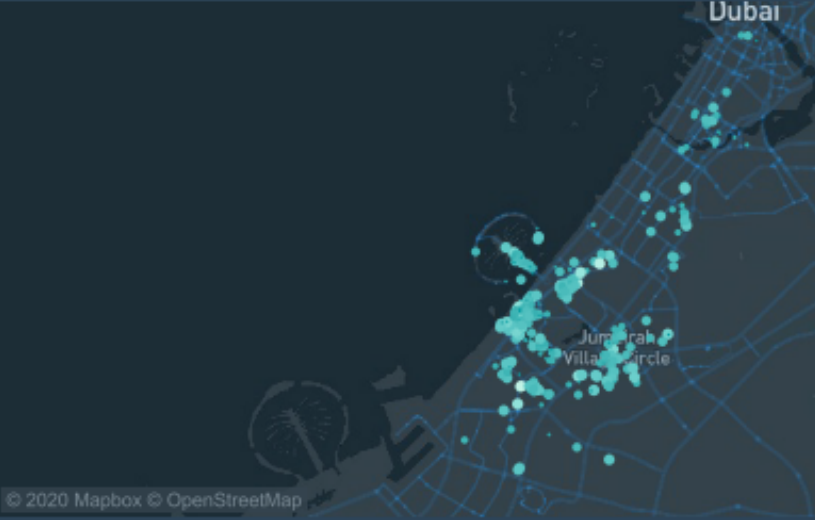
Neighborhood +1.0

Staff +1.0

Parking -1.0

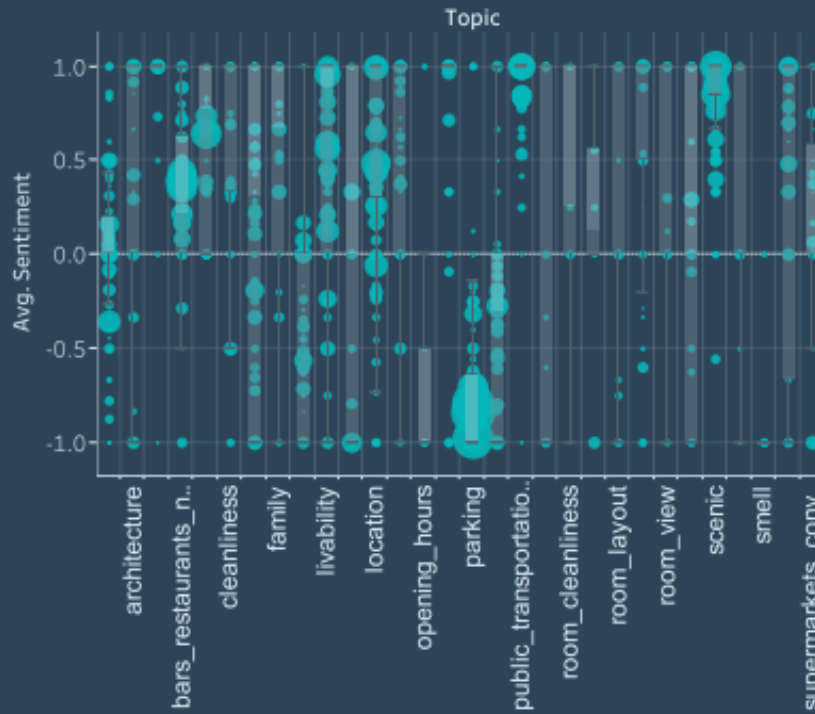


Location Selection

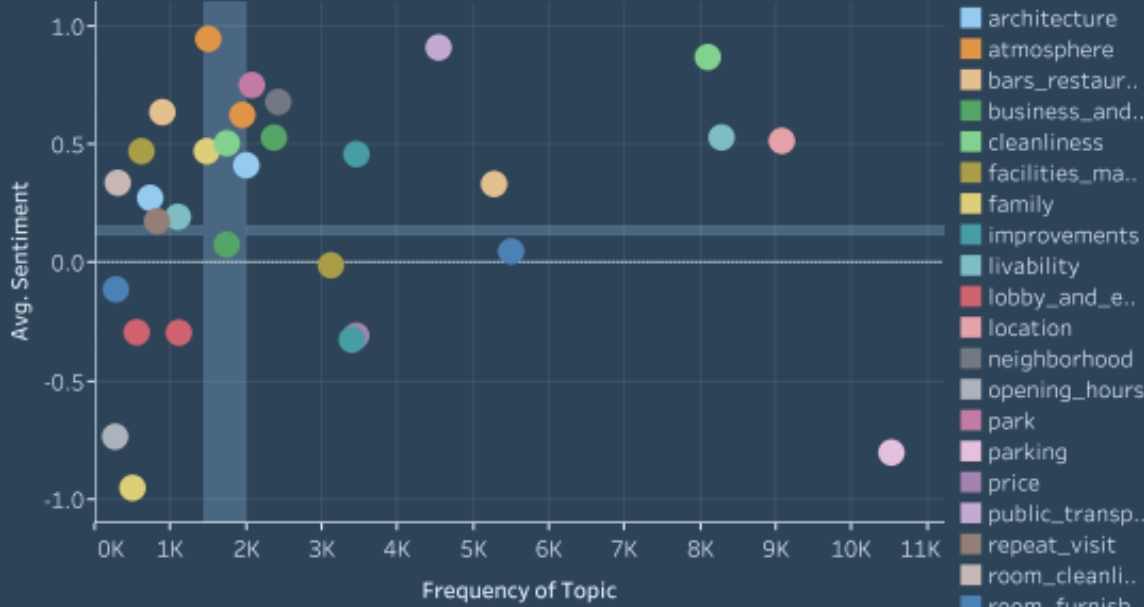


Null	46VW+JG Dubai
10C Building, JVC	3632+36 Dubai
48 Burj Gate Residence	6729+5M Dubai
A4 Space	46RG+RG Dubai
Abu Keibal, Shoreline 17	445X+62 Dubai
Al Baha Building	773X+59 Dubai
Al Bateen Residences	34FH+67 Dubai
Al Bateen Tower (Sunda..	34CH+W2 Dubai
Al Dabas, Shoreline 2	4542+X3 Dubai
Al Das, Shoreline 10	447R+JJ Dubai
Al Dhafrah 2, JVC	3632+36 Dubai

Comparative Location Performance



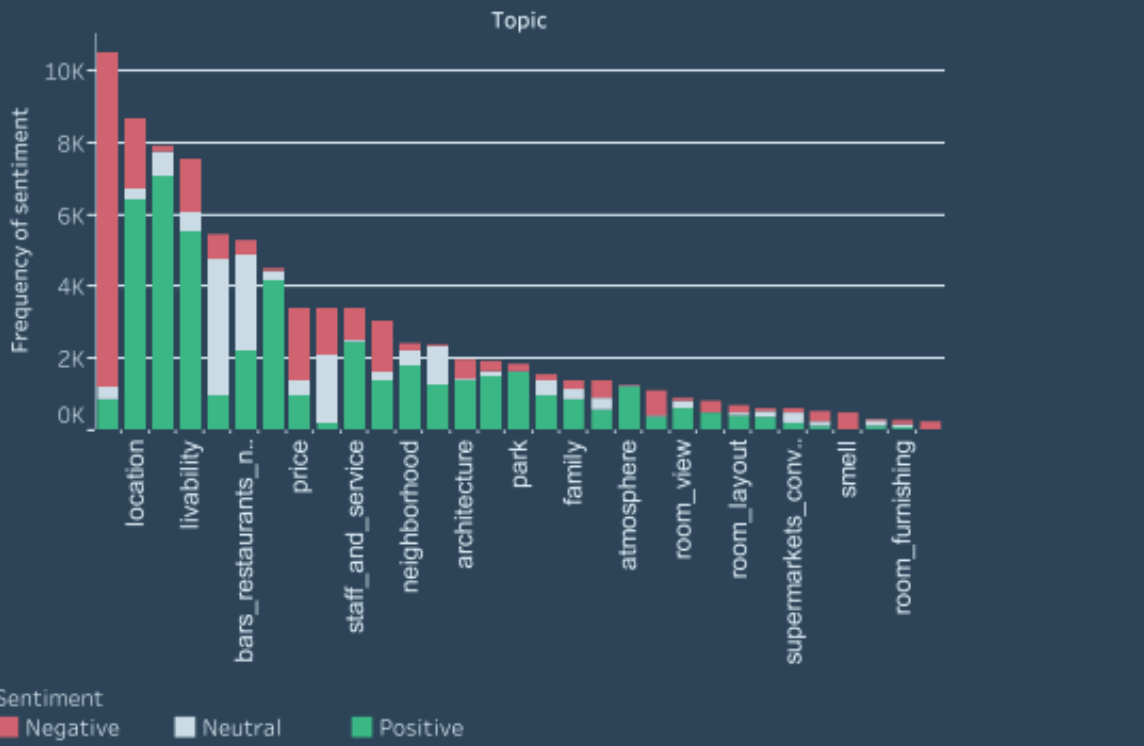
SWOT Perception Matrix



Location Overview Statistics

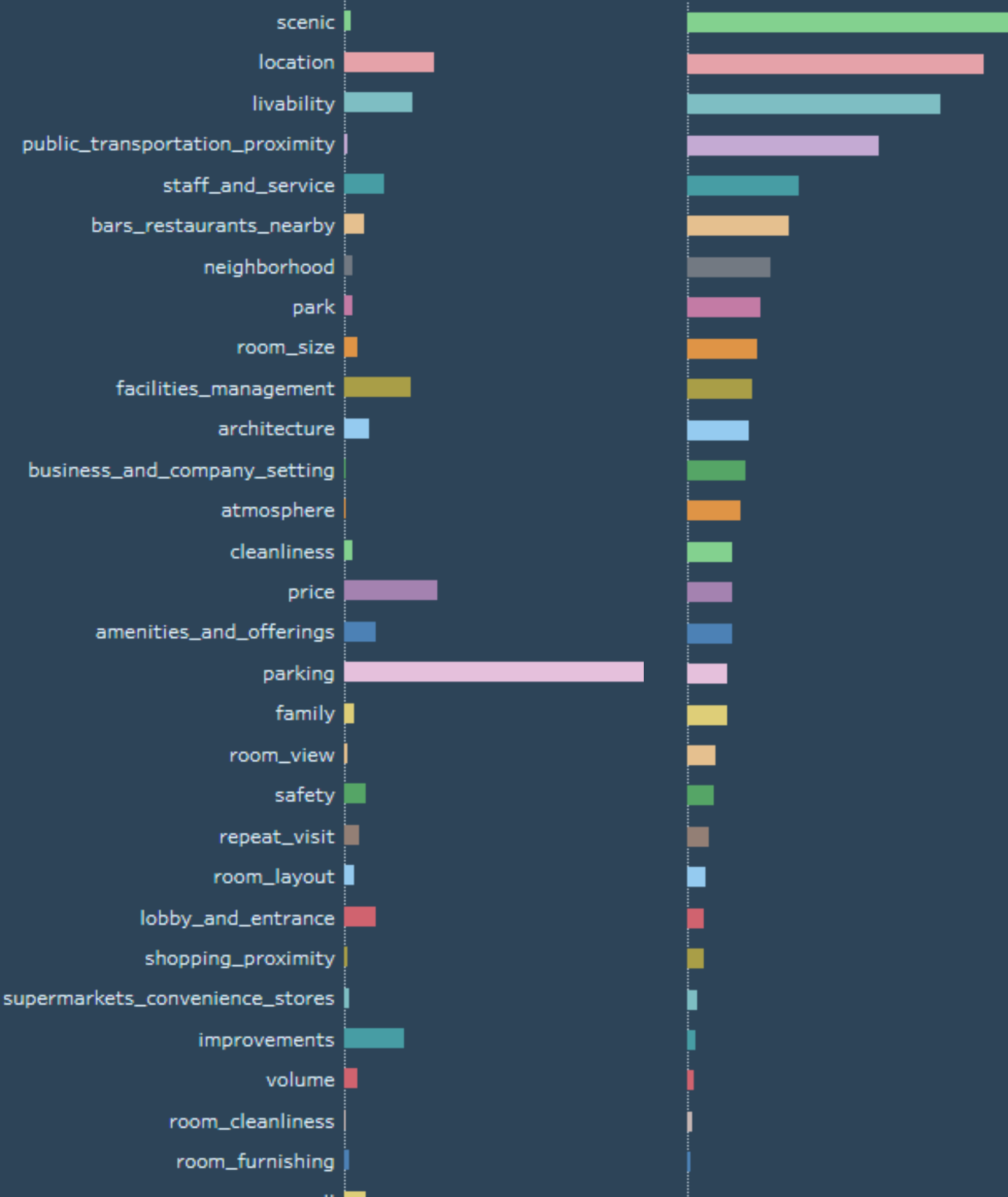


Location Perception Performance



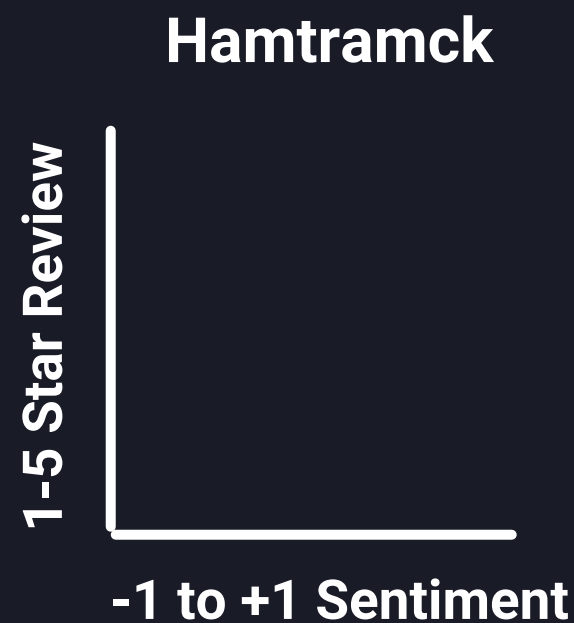
Negative

Positive

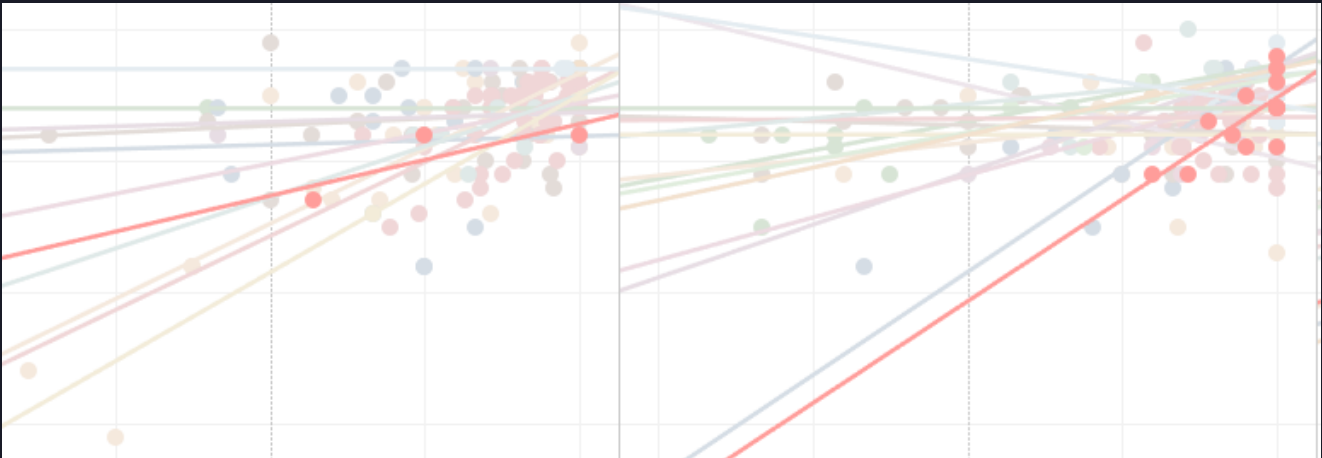


MICHIGAN, USA

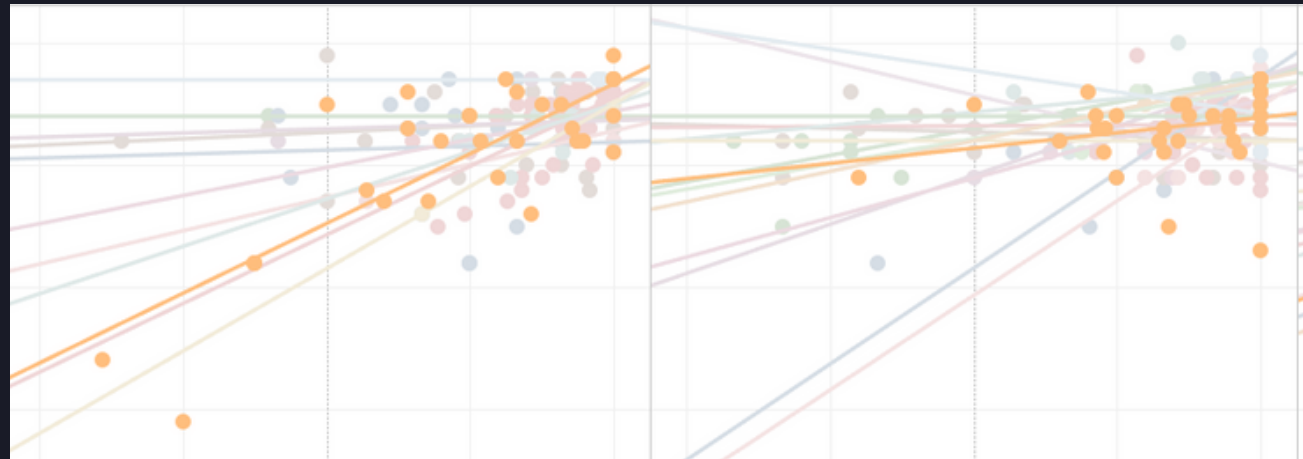
Hamtramck vs. Northville



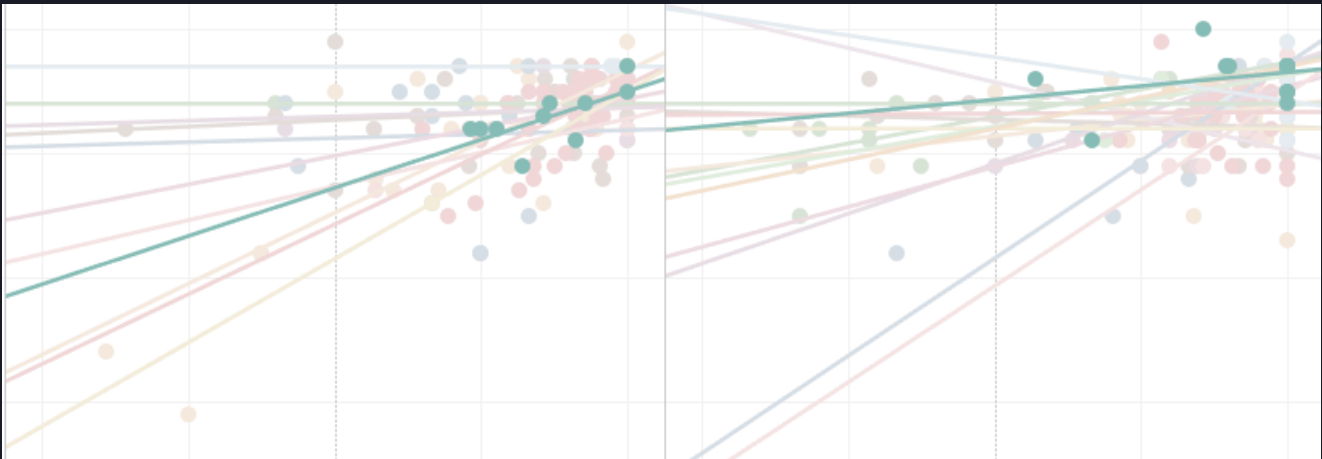
Cleanliness $r^2=0.66, p < 0.39, r^2=0.52, p < 0.005$



Staff $r^2=0.62, p < 0.001, r^2=0.06, p < 0.14$



Family $r^2=0.44, p < 0.03, r^2=0.08, p < 0.33$






OPEN STREETS QUICK FINDINGS

Changes in **consumer perceptions** of retail in **open streets programs** in Bethesda, MD & Tampa, FL in 2020.


OPEN STREETS IN TAMPA, FL

 **+0.35**

Sentiment on **Spending Time as a Couple** during the 2020 summer

Retail on **open streets** had a full **0.10 higher** than surrounding streets regarding **Spending Time as a Couple** on a -1 to 1 scale.

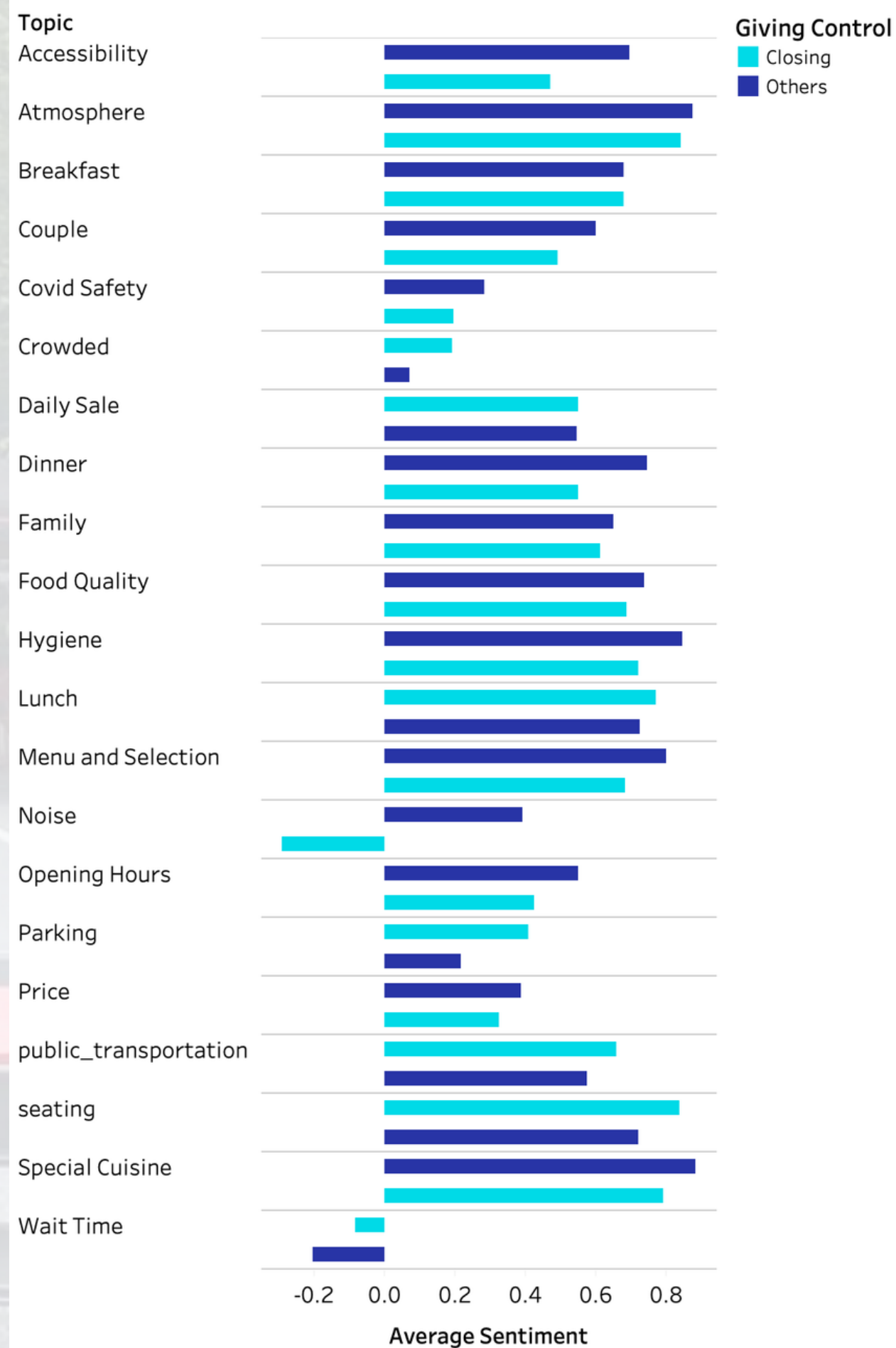
OPEN STREETS IN BETHESDA, MD

 **+0.12**

Sentiment on **Outdoor Seating** during the 2020 summer

Retail on **open streets** had a full **0.25 higher** than surrounding streets regarding **Outdoor Seating** on a -1 to 1 scale.

US Malls



Retail Closures



**# of Languages Used
to Review Parks**

1

SPAs (Single page applications) & what it means for web scraping

2

Little tricks add up (e.g. sleep time)

3

Think programmatically (collect URLs first, then visit each page)

4

VPNs, Classes & Multiprocessing

Web Scraping

[GITHUB.COM/THEO-GO/QUICK_SELENIUM_TEMPLATE/](https://github.com/theo-go/quick_selenium_template/)

- [Botsol](#)
- [Webscraper.io](#)

1

Sometimes, doesn't
have to be fancy "ML"

2

Think bottlenecks and
training datasets

3

Geolocated and
temporal can be fuzzy
things (e.g. think
"mornings" or "by the
water")

Natural Language Processing

- Snorkel
- AllenNLP
- FastText

1

Not too many things at once

2

What is the story you're communicating?

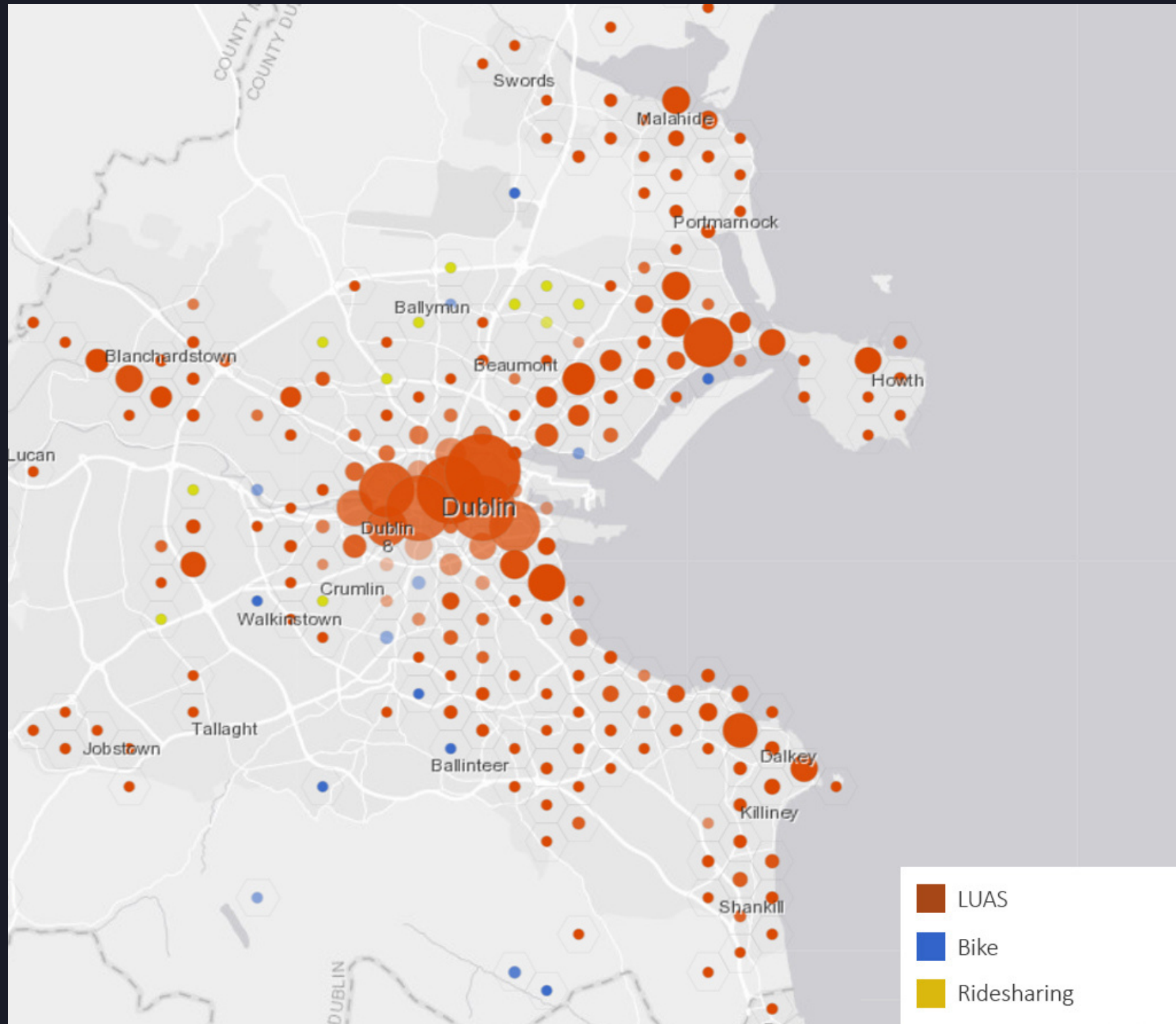
3

Are there patterns to bring out in the data?

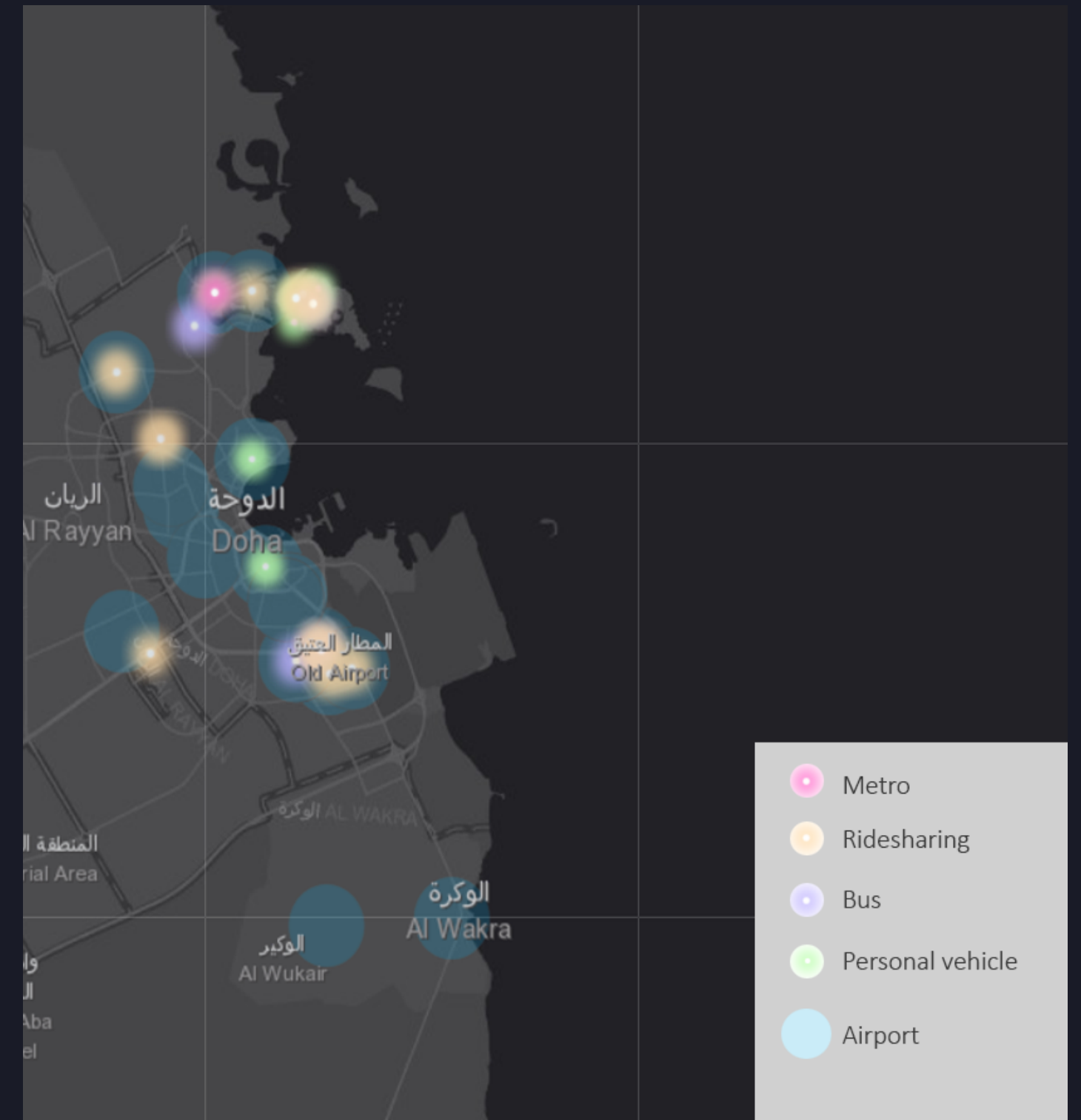
Mapping & Data Viz

- [Kepler.gl](#)
- [Gephi](#)
- [Data-to-viz](#)

Keeping it Simple



[Get the data here.](#)



	A	B	C	D	E
1	Tool Name	Amazingness in improving your workflow	Type	Description	Why Use? (Almost everything below has an amazing free tier 😊)
2	Bypass-paywalls	🤖👤🍷🌈🔑🍌🍷🍷	Productivity	Bypasses paywalls for any news site.	Just amazing.
3	https://www.kapwing.com/	🤖👤🍷🌈🔑🍌🍷🍷	Video, Photo, Ppt	Free video maker for short marketing videos.	Great tool in its own right, and unlike competition, is 100% free.
4	https://www.photopea.com/	🤖👤🍷🌈🔑🍌🍷🍷	Video, Photo, Ppt	Photoshop but online and free.	See description.
5	Quire	🤖👤🍷🌈🔑🍌🍷🍷	Productivity	Project management software.	Pretty much the most streamlined, clean project management software out
6	Data-to-Viz	🤖👤🍷🌈🔑🍌🍷🍷	Data & viz	Great resource to understand data matching to different kinds of vizs	Beautiful crash course in data viz. What to use where and why.
7	Webscraper.io	🤖👤🍷🌈🔑🍌🍷🍷	Data & viz	Quick scraper on the fly.	It doesn't get better than this for scraping quickly -- I personally use it not to scrape but rather to get CSS selectors as well as to have new
8	Clickup	🤖👤🍷🌈🔑🍌🍷	Productivity	Project management software.	Tons of features (like all the competition e.g. Asana) BUT unlimited # of members. Also recommend Notion (unlimited members, similar to
9	Awesome production ML	🤖👤🍷🌈🔑	Ideas	An awesome list (Google them) of machine learning projects.	Awesome lists are a great way to get started and situate yourself in a completely new topic.
10	Maps of Mind	🤖👤🍷🌈🔑	Ideas	Mindmapping software.	Fantastic free version -- lets you add in lots of details per map and doesn't force you into the popular "centralized" mindmap node format.
11	IconsDB	🤖👤🍷🌈🔑	Video, Photo, Ppt	Icons	Quick place to get icons of all colors
12	The Great Suspender	🤖👤🍷🌈🔑	Productivity	Suspends chrome windows	So your computer doesn't slow down... Typical Chrome...

More Helpful Tools

[Link here](#)

Thank you!

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