

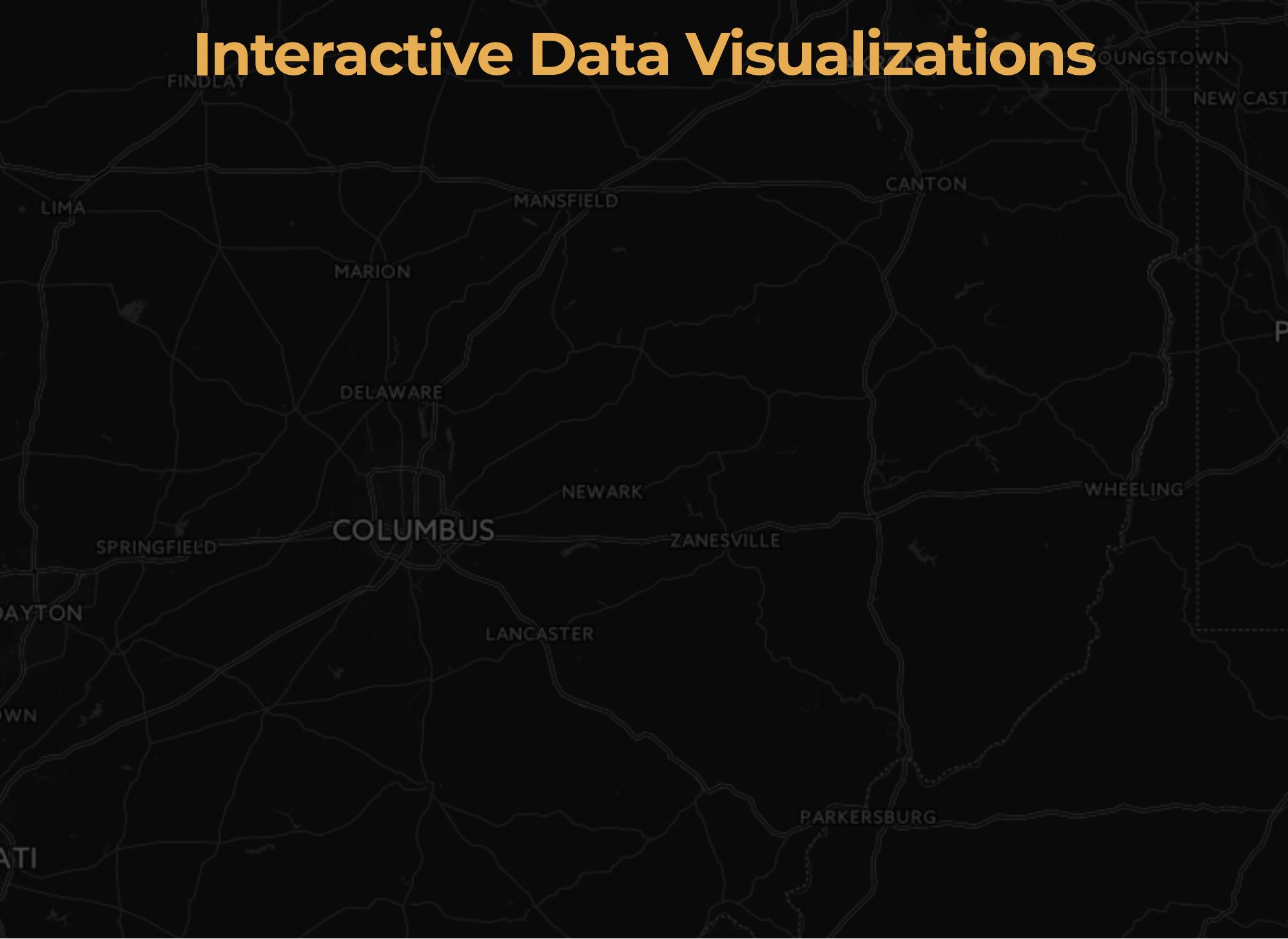
Beyond the Desktop

*Open Source Experiments in Web
Mapping*

Malcolm Meyer | Nick Kroncke
Ohio Valley Regional Development Commission

Ohio GIS Conference September 30, 2016

Interactive Data Visualizations



Select a State ▾



Republican

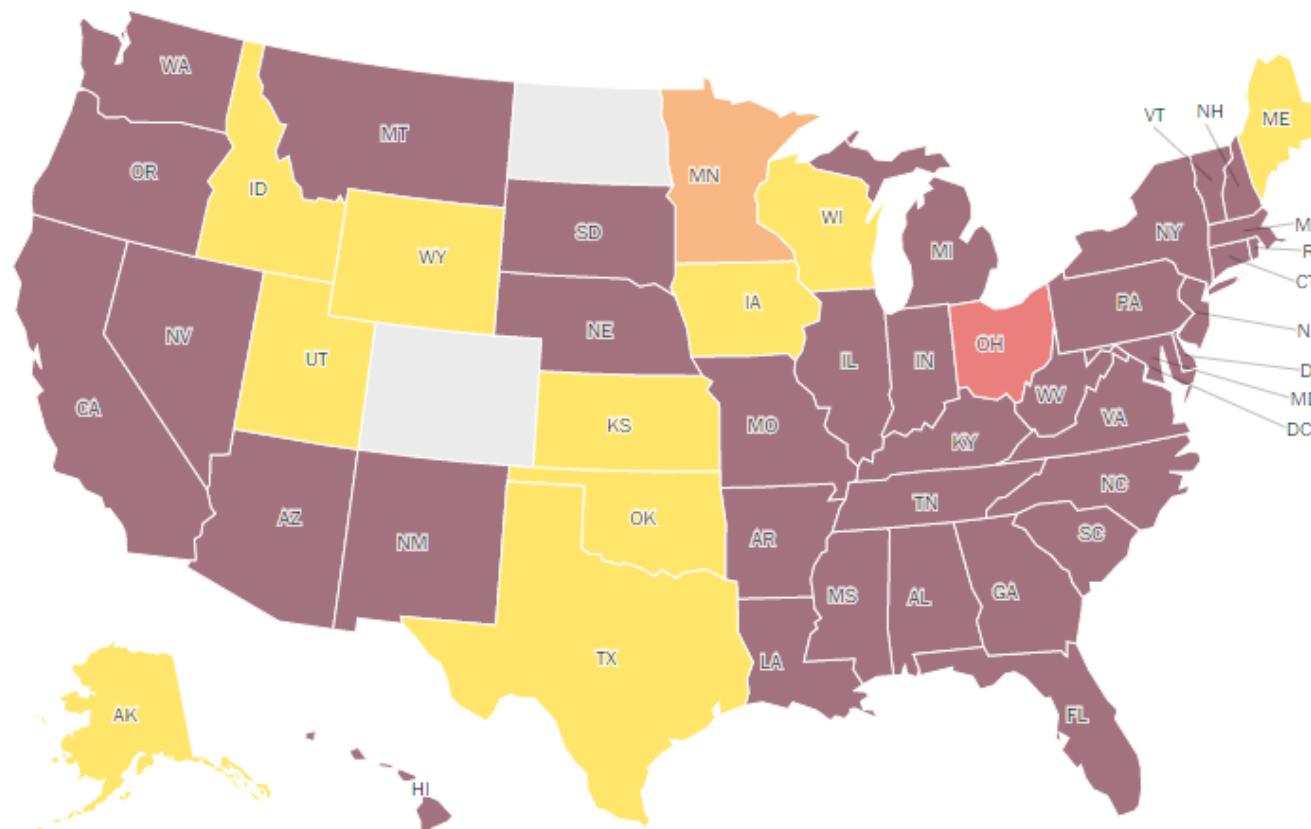
Trump 1,543 DEL



Democracy

Clinton 2,807 DEL

Leader Winner Trump Kasich Rubio Cruz



Source: AP

Native Mobile Apps



Cleveland Metroparks

Cleveland Metroparks Health & Fitness

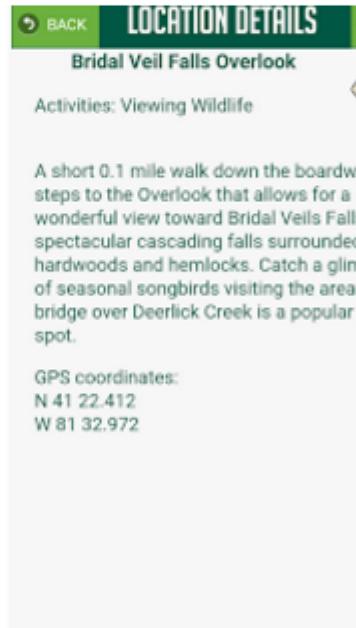
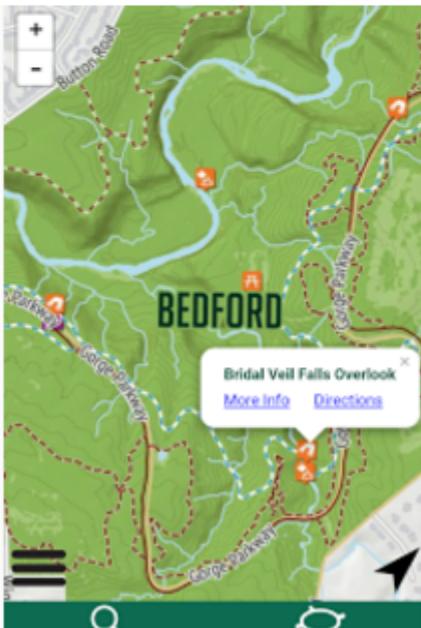
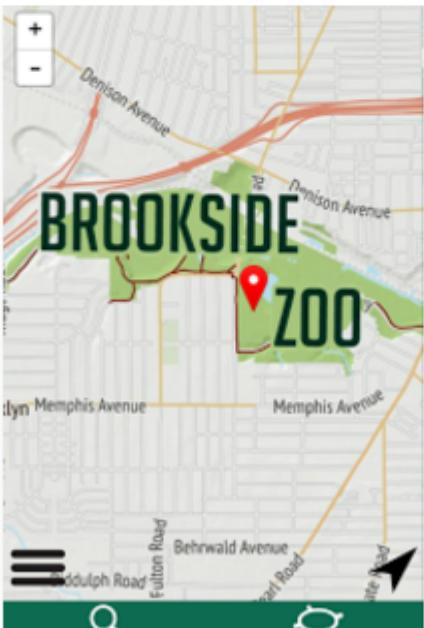
★★★★★ 36

E Everyone

This app is compatible with your device.

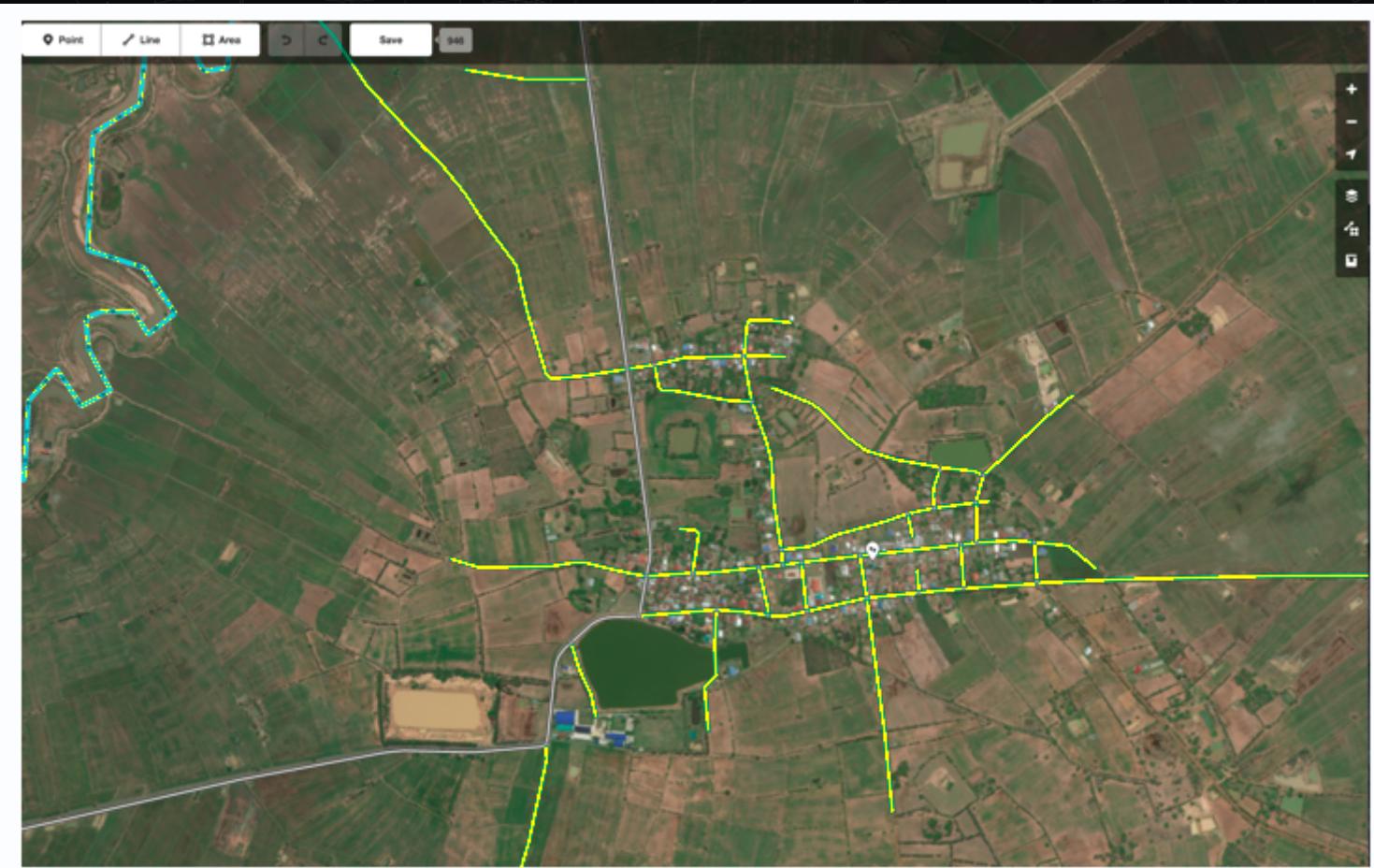
Add to Wishlist

Install

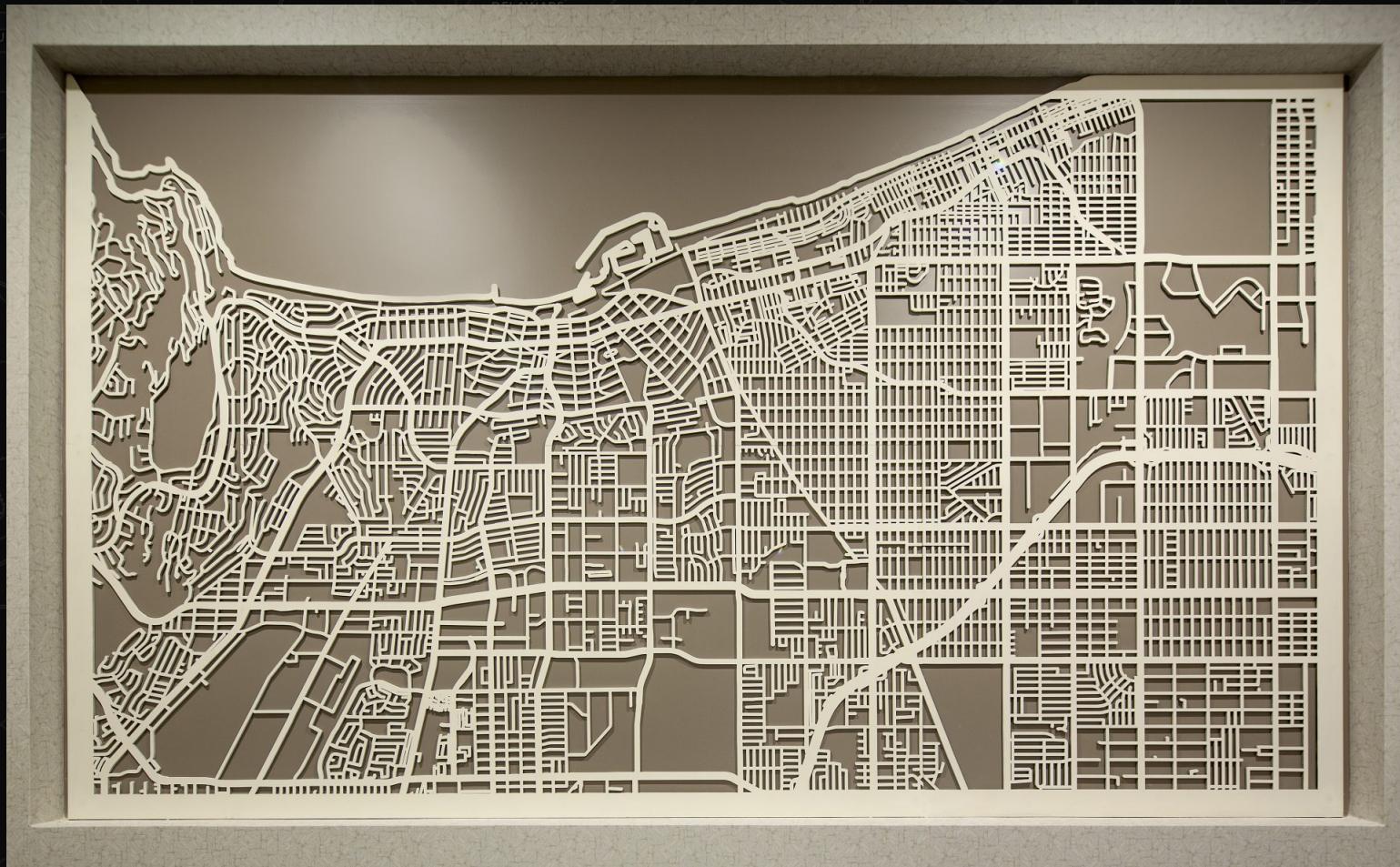


Machine Learning

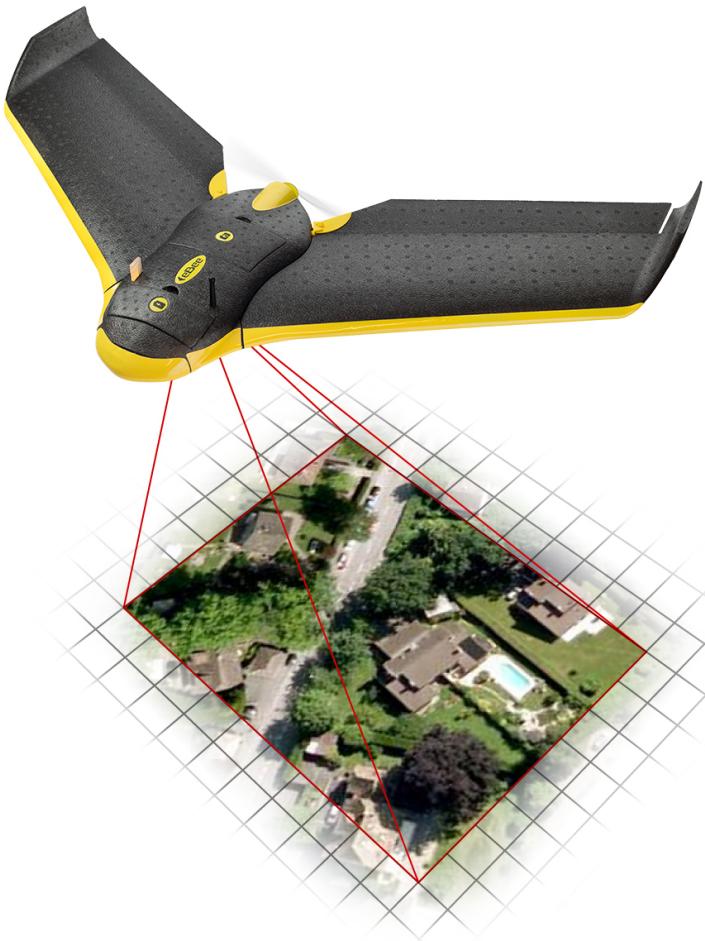
Yellow roads were programatically mapped by Facebook.



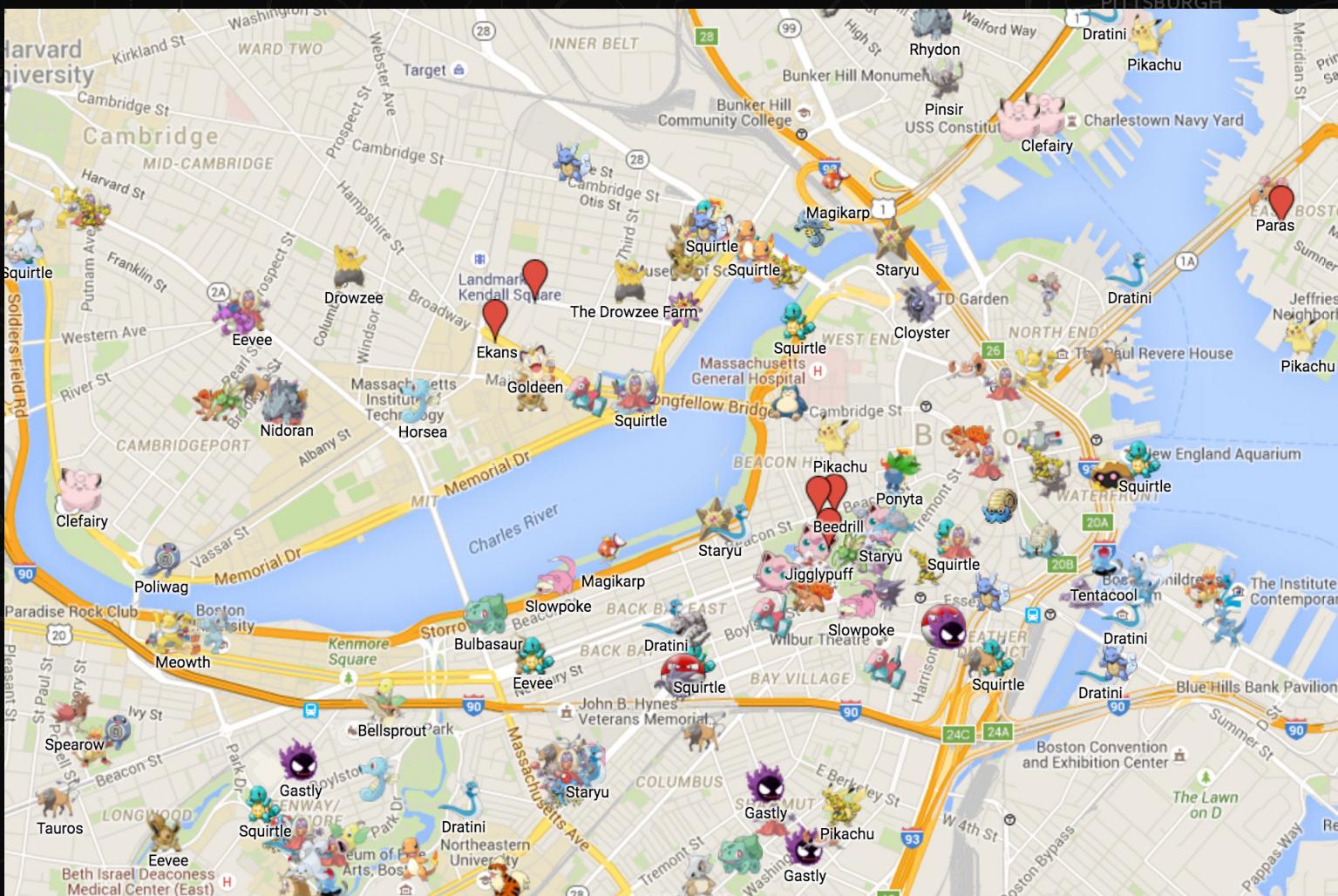
Cartography as Art



UAV Mapping



Of Course...



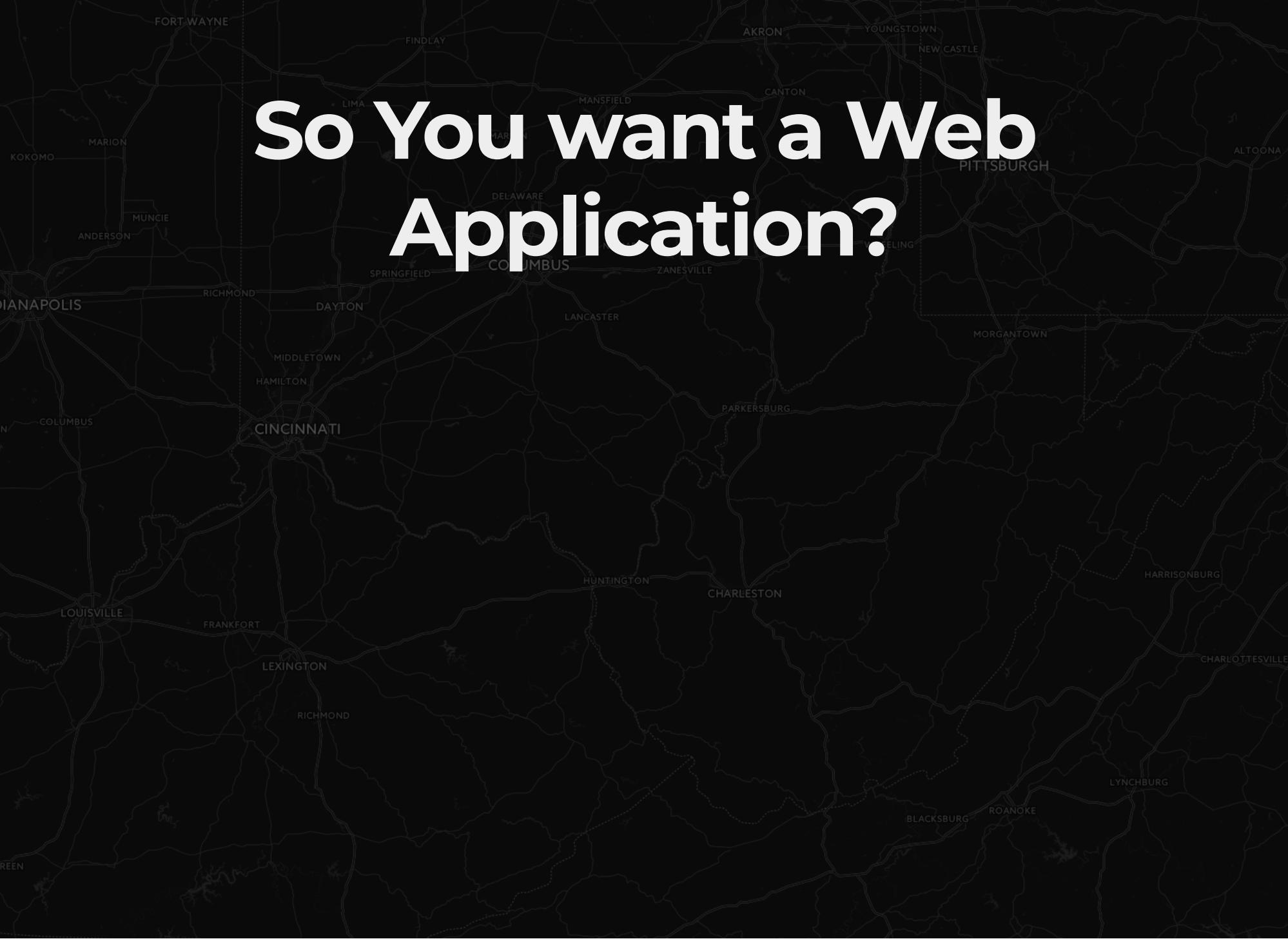
Web GIS Trends

Interest over time. Web Search. Worldwide, 2004 - present.



Google

[View full report in Google Trends](#)



So You want a Web Application?

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- In-House vs Third Party Developer
- Free Open Source Software (FOSS) vs Proprietary Solutions

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Issue: "Out of the box" solutions can limit your capabilities while open source development appears too complex

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Solution: Understand the limitations and use the best tool for the job

Rolling Your Own Solution



Rolling Your Own Solution

Modern GIS Toolkit



Rolling Your Own Solution

Modern GIS Toolkit

ArcGIS Desktop

Rolling Your Own Solution

Modern GIS Toolkit

ArcGIS Desktop | Python

Rolling Your Own Solution

Modern GIS Toolkit

ArcGIS Desktop | Python | QGIS

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Modern GIS Toolkit

ArcGIS Desktop | Python | QGIS | And Many More...

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What Tools does OVRDC Use?

- ArcMap & QGIS
- Leaflet & Chart.js
- Atom & Sublime Text (Text Editors)
- Jekyll (www.ovrdc.org/apps)
- GitHub (Code Repository)
- Google Drive & Google APIs
- Wordpress (www.ovrdc.org)
- ArcGIS Online & Carto



A grayscale map of the Ohio River basin, showing major cities and river networks. The map includes labels for Fort Wayne, Marion, Kokomo, Muncie, Anderson, Richmond, Dayton, Middletown, Hamilton, Indianapolis, Cincinnati, Springfield, Columbus, Newark, Lancaster, Zanesville, Parkersburg, Huntington, Charleston, Louisville, Frankfort, Lexington, Richmond, Youngstown, New Castle, Pittsburgh, Morgantown, Harrisonburg, Charlottesville, Lynchburg, Roanoke, Blacksburg, and Roanoke.

In **FOSS** There is No Help Desk!!



A grayscale map of the Ohio River basin, showing major cities like Fort Wayne, Findlay, Akron, Youngstown, New Castle, Pittsburgh, Indianapolis, Cincinnati, Columbus, Louisville, Frankfort, Lexington, Richmond, Huntington, Charleston, Parkersburg, Wheeling, Zanesville, Newark, and many smaller towns. The map features a dense network of rivers and streams.

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Desk!!

Resources to Get Started



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Considerations for Web Apps



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IS ALL THIS REALLY NECESSARY?



Caution

Short List of Deprecated Web Services 2014-Present

Web Hosting in Google Drive

Google Maps Engine

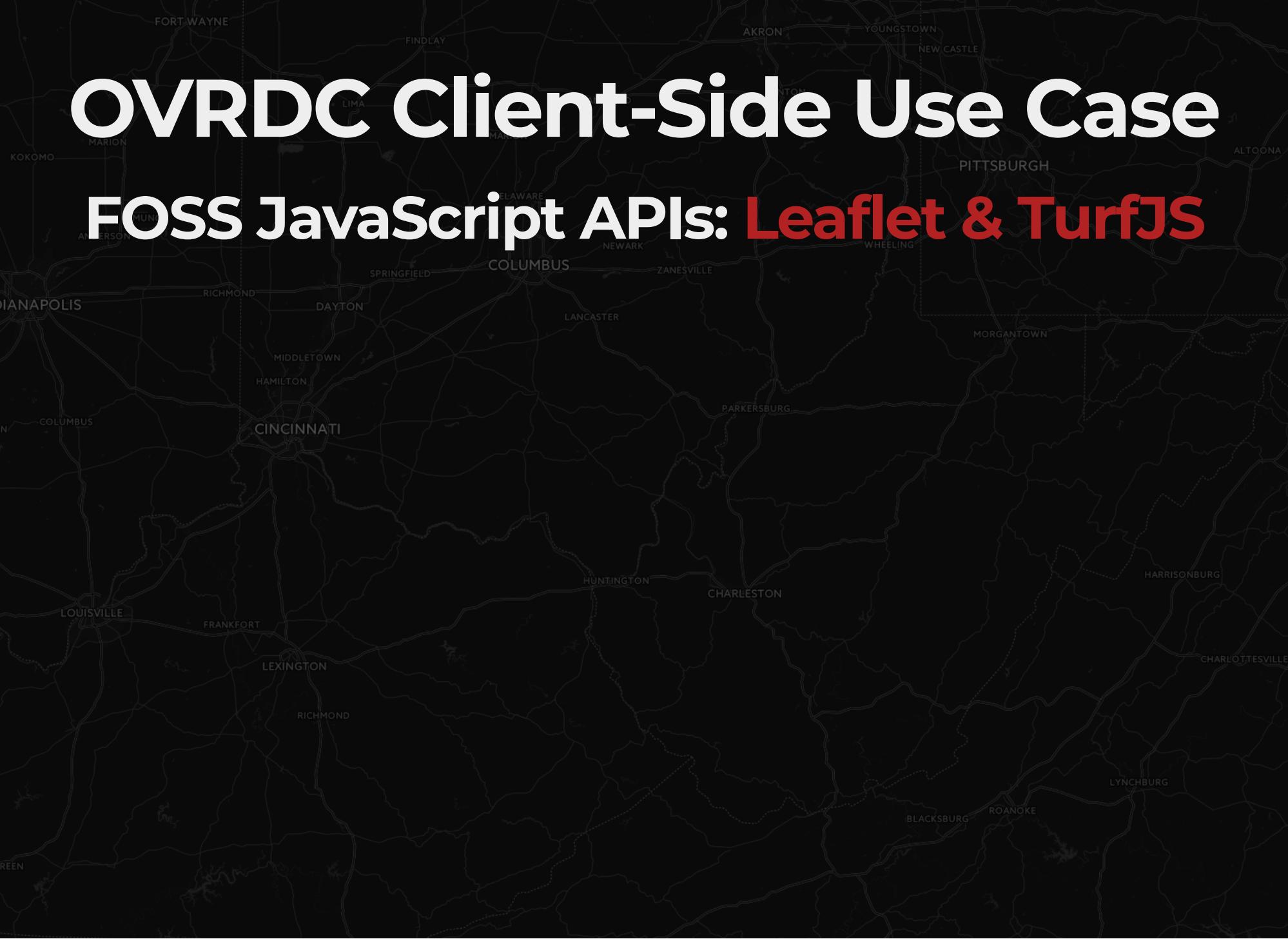
Google's Android App My Tracks

Copy Cloud Storage

Dropbox Public Folder Hosting

OVRDC Client-Side Use Case

FOSS JavaScript APIs: Leaflet & TurfJS



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FOSS JavaScript APIs: **Leaflet & TurfJS**

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(Google, Dropbox, Firebase, Others...)

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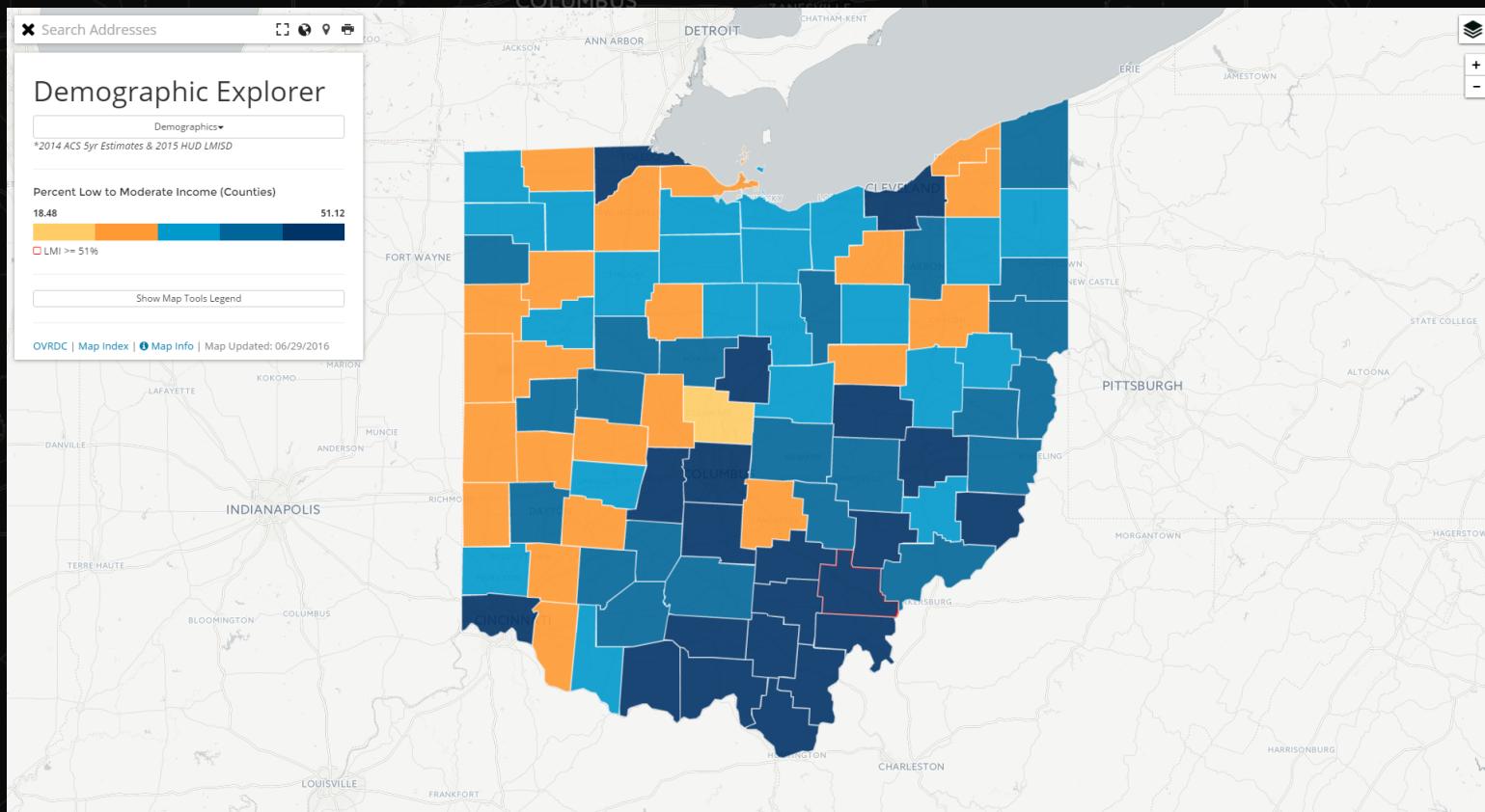
Cloud-Based Storage/APIs

(Google, Dropbox, Firebase, Others...)

- User Feedback
- Image/Asset Storage
- Freemium Model

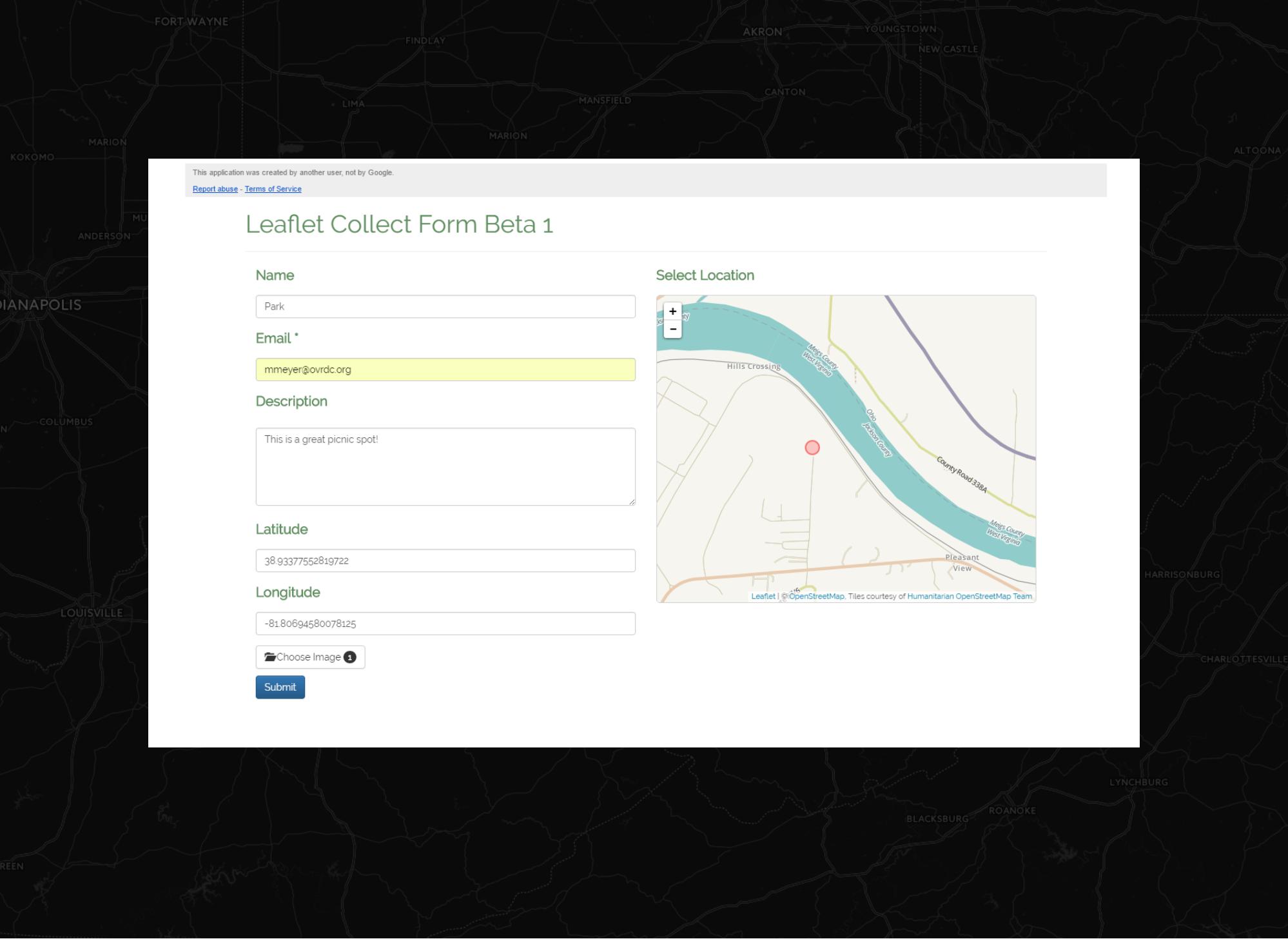
Demographic Explorer

Simple, Targeted App - Inspired by the NACO County Explorer



Cloud Based Collection Apps

Google Scripts with Image Upload | Google Firebase Version



This application was created by another user, not by Google.

[Report abuse](#) - [Terms of Service](#)

Leaflet Collect Form Beta 1

Name

Park

Email *

mmeye@ovrdc.org

Description

This is a great picnic spot!

Latitude

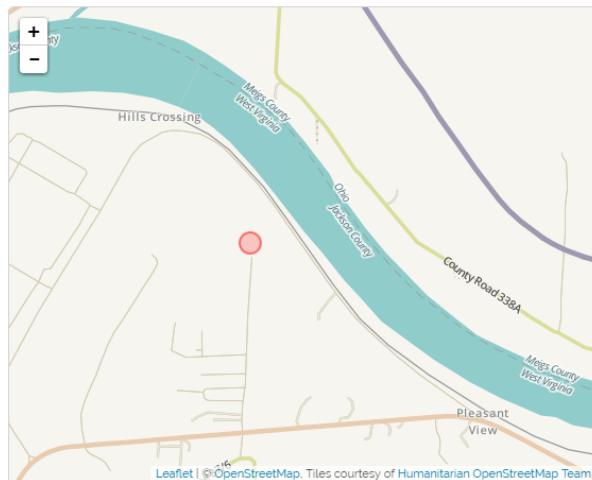
38.93377552819722

Longitude

-81.80694580078125

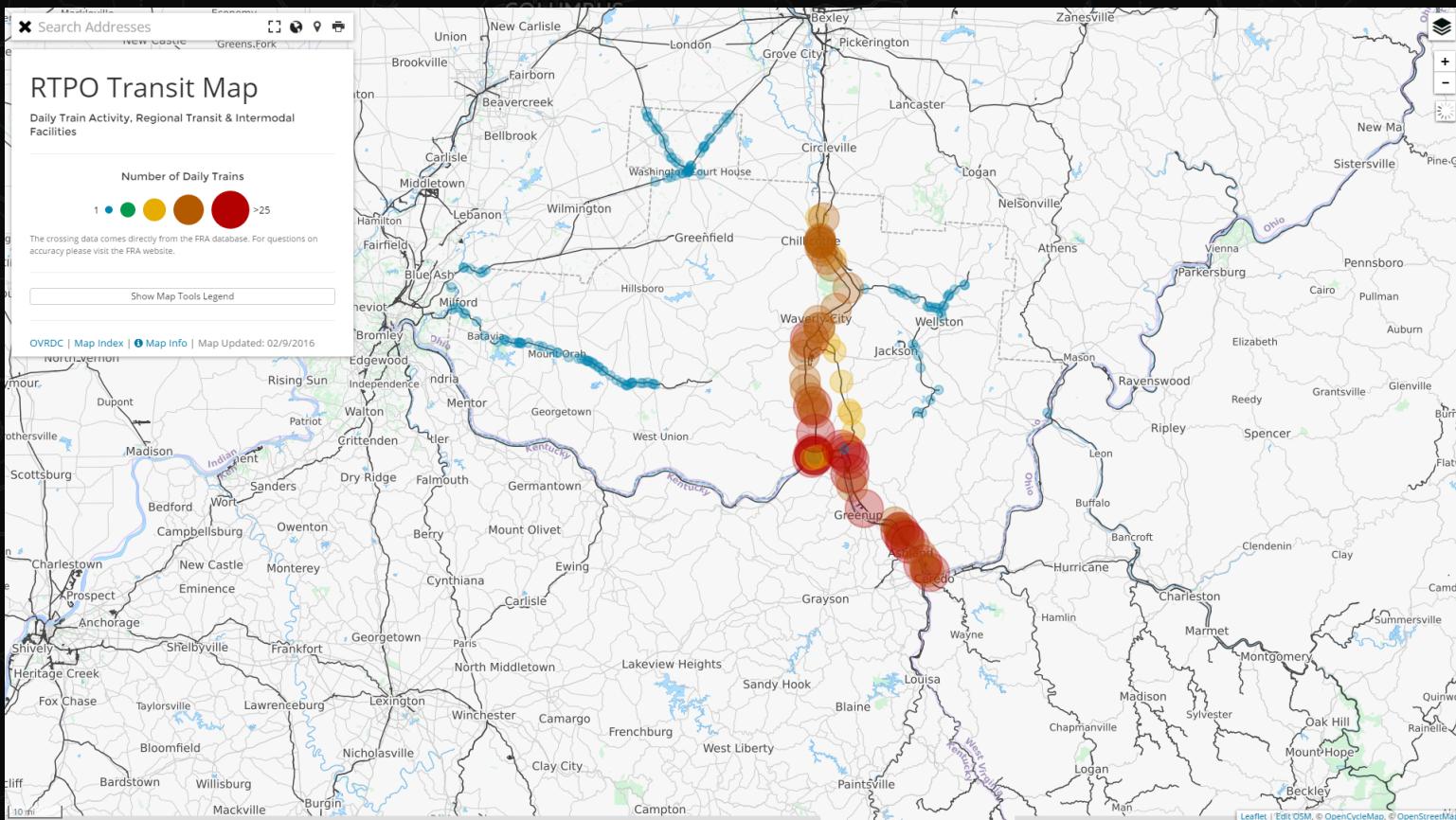
1

Select Location



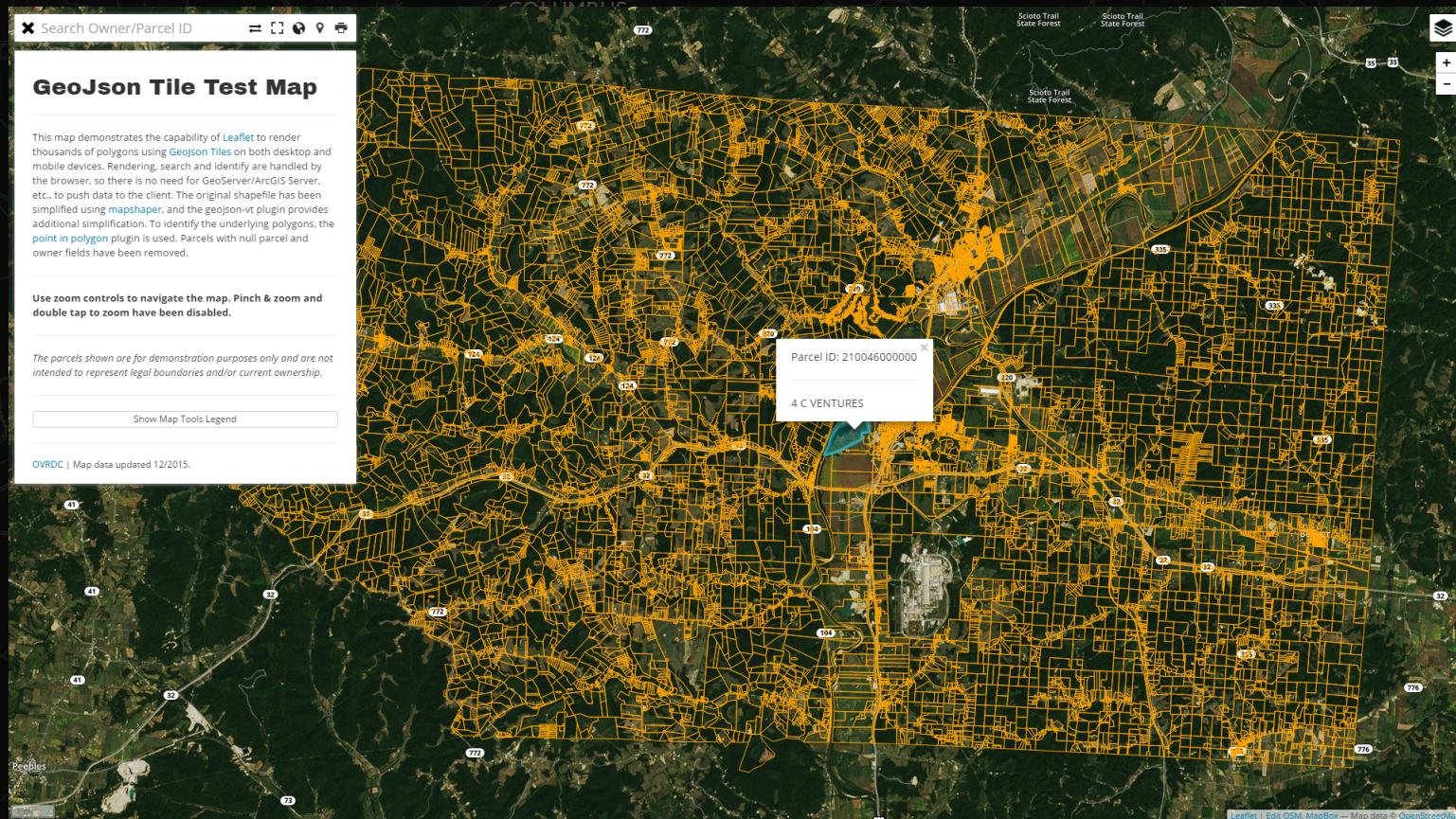
FRA Transit Data

Using Public APIs: Current Data & Real-Time Apps

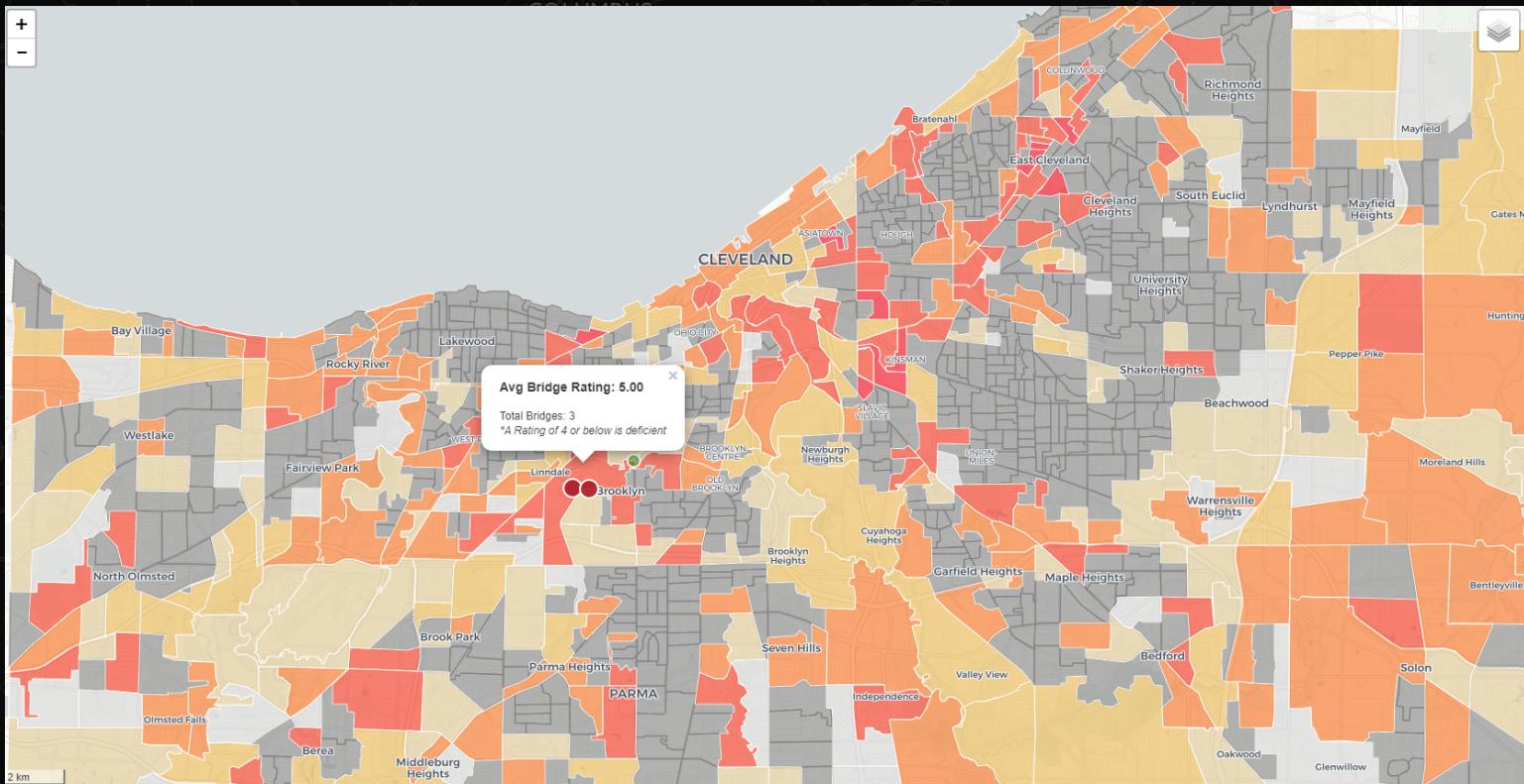


Parcel Viewer

A Client-Side Parcel Viewer with Feature Search



Bridge Analysis with TurfJS





Looking Forward
Cloud-Hosted PostGIS
Vector Tile Server
OVRDC Custom Basemaps
Utilize QGIS in New Projects

Thanks!

Malcolm Meyer | Nick Kroncke

@getBounds

Home