

Turf

Advanced Geo-spatial analysis for browsers and Node.

How does the magic happen?

GeoJSON + Turf = Information

GeoJSON + Turf + Mapping = Infographics

What is GeoJSON?

GeoJSON is a format for encoding geographic data structures.

- Point
- LineString
- Polygon
- MultiPoint
- MultiLineString
- MultiPolygon

GeoJSON Collections

- GeometryCollection
- Feature
- FeatureCollection

Explore GeoJSON

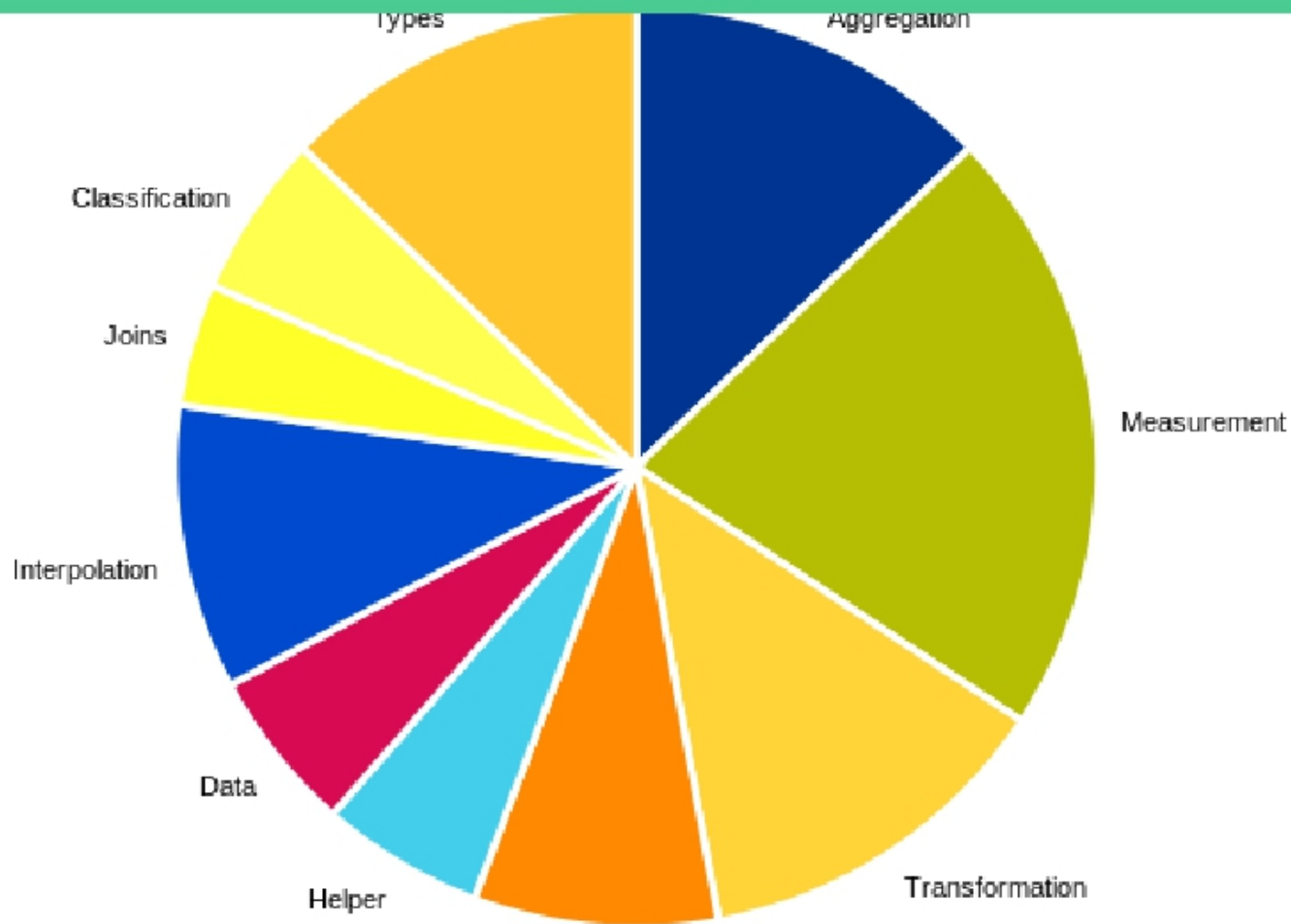
geojson.io is a graphical mapping site.

It lets you annotate a map (and much more).

It generates GeoJSON of those annotations.

Okay...What does Turf do?

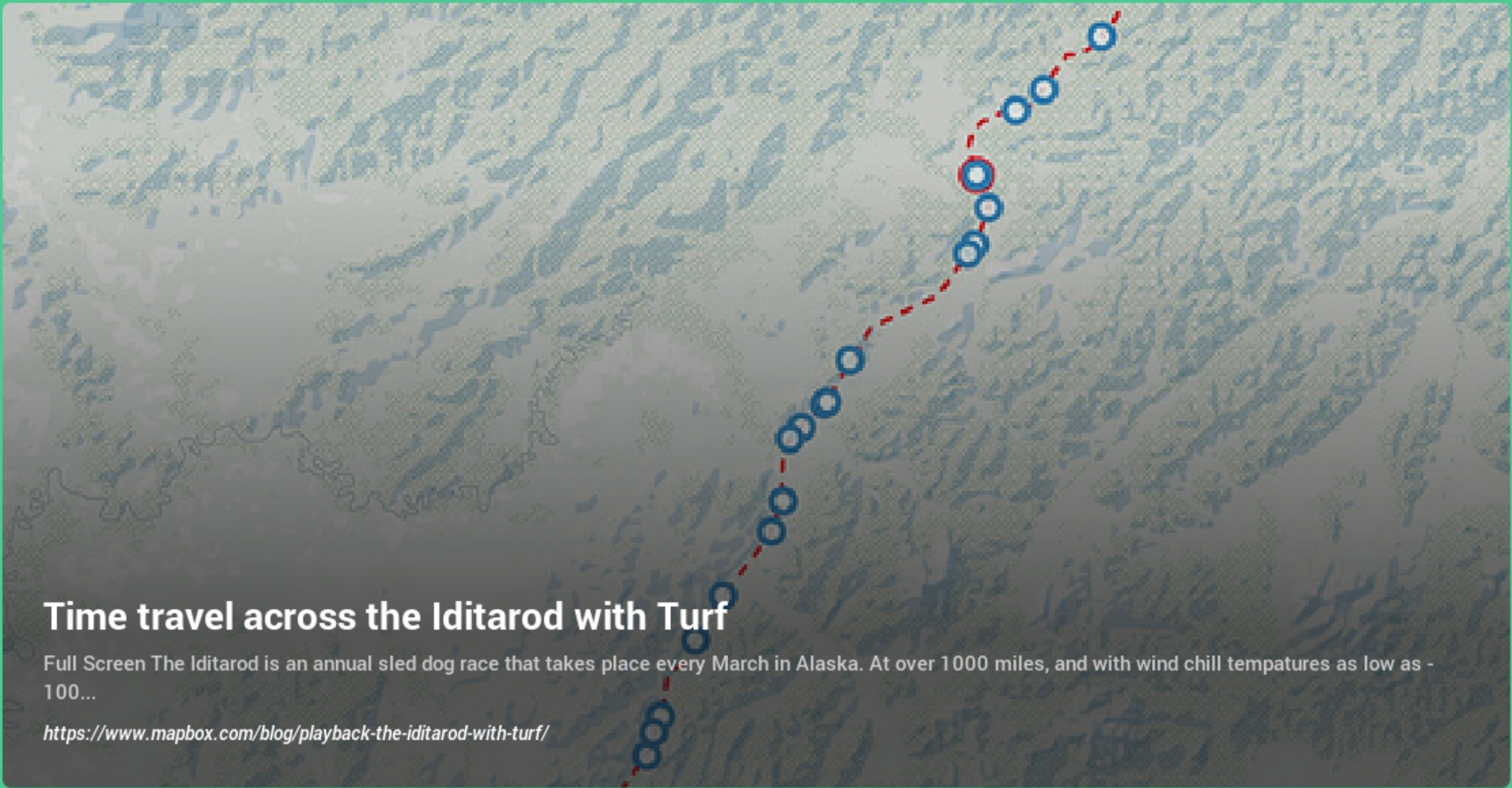
Features



<https://public.chartblocks.com/c/54ed563cc9a61d6475aaa25f>

Offline version

Use Case: Tracking



Time travel across the Iditarod with Turf

Full Screen The Iditarod is an annual sled dog race that takes place every March in Alaska. At over 1000 miles, and with wind chill temperatures as low as -100...

<https://www.mapbox.com/blog/playback-the-iditarod-with-turf/>

Use Case: Planning

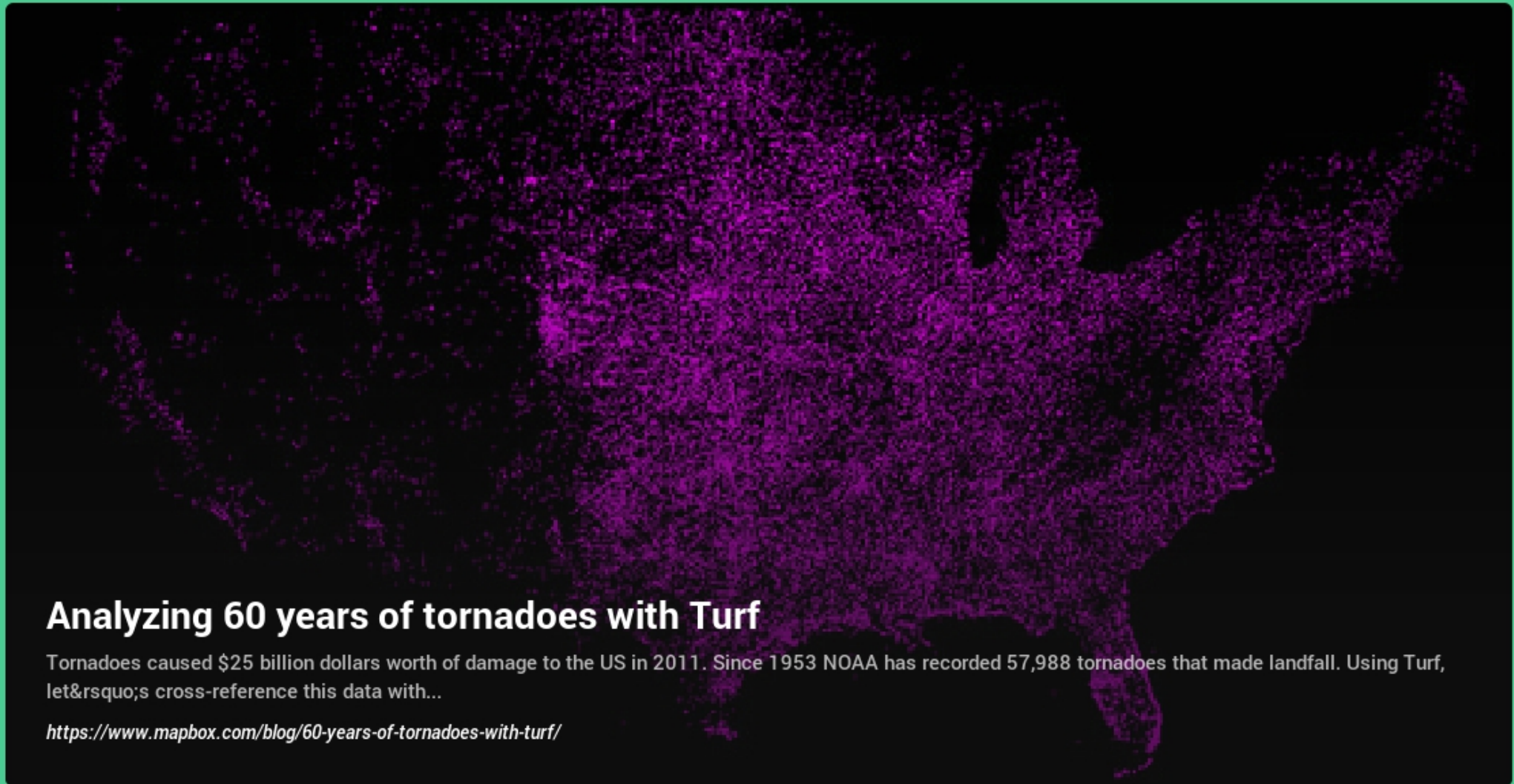


Plan a ride with Surface, Directions, and Turf.js

View full-screen demo City bikeshares are a great way to get around if your town has them. But they're only convenient as long as: There are stations near you and...

<https://www.mapbox.com/blog/dc-bikeshare-revisited/>

Use Case: Event Density



Node Example (Hacked from the Event Density use case)

Goal: Count my Swarm check-ins by region

Inputs: GeoJSON for geographic borders & check-ins

Output: A listing of region and check-in counts

Node Example: Code (See JS Tab)



<http://codepen.io/bshouse/pen/ogyvQN>

Offline version

Node Example: Output

USA-CA: 30

USA-CO: 6102

JPN: 18

KOR: 140

MEX: 8

USA-NV: 35

USA-WA: 14

USA-TX: 15

Questions

[Insert questions and answers here]

Resources

[Introduction to Turf](#)

[Socrata Open Data](#)

[Open Data Colorado](#)

[Natural Earth Data](#)

[MapShaper](#)

[Ogre](#)

References

[TurfJS.org](#)

[GeoJSON.io](#)

[MapBox.com](#)

[MapShaper.org](#)

Tips & Tricks

Shape Files to GeoJSON:

```
ogr2ogr -F GeoJSON -t_srs crs:84 [Output].json [Input].shp
```

RSS to GeoJSON:

```
ogr2ogr -F GeoJSON [Output].json [Input].rss
```

Twitter to GeoJSON:

```
echo '{"type":"FeatureCollection","features": "$(cat TWITTER.json | jq 'select(.geo)| {type:
"Feature", geometry:{type:"Point", coordinates:
[.geo.coordinates[1],.geo.coordinates[0]]},properties:
{tweet_body:.text,handle:.user.name}}' | jq -s .)"}' > TWITTER_GEO.json
```