

JavaScript

Web Cartography



BOSTON

APR 30 – MAY 3

Mapping the Global Supply Chain Graph

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Why make web maps?

truth, beauty, serenity

Why the web

The web has overtaken desktop applications as dominant mapping platform

[Google earth](#)

<https://avs.auto/>

Tools



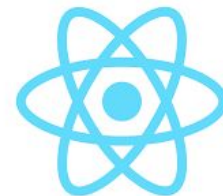
Webpack



JSON loader



Node package
registry



react

create-react-app



enter a package name add ☐ daily ☒ weekly ☐ monthly

enter minimal mode

[this chart](#) or try [node-sass vs less vs stylus](#) [recompose vs mobx](#) [log4js vs winston](#) [browserify vs webpack vs rollup vs parcel-bundler](#) [react vs angular vs @angular/core vs ember-cli vs vue](#)
[glamor vs aphrodite vs radium vs glamorous vs styled-components vs jss vs emotion](#)

January 26th, 2019 - February 1st

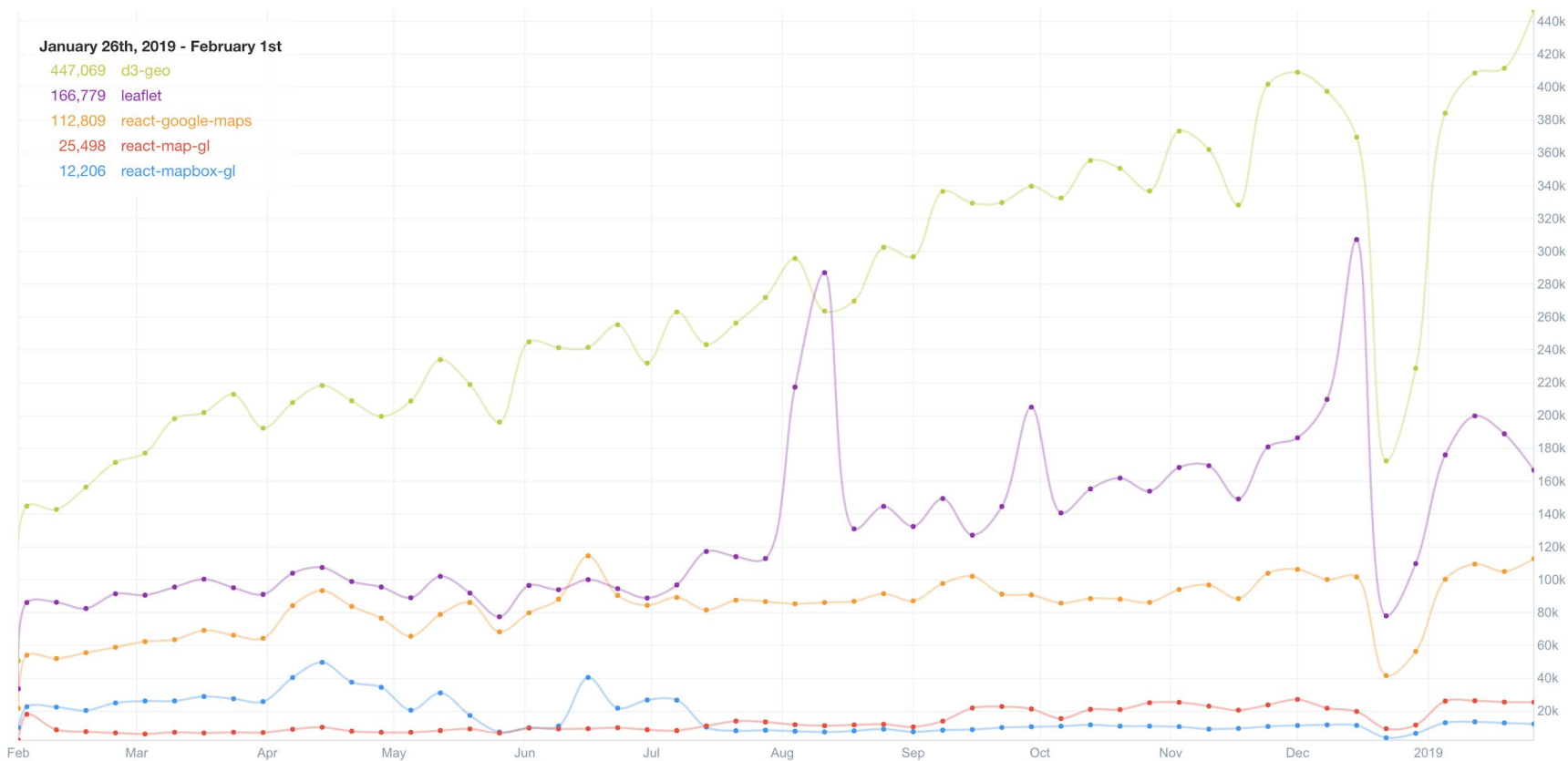
447,069 d3-geo

166,779 leaflet

112,809 react-google-maps

25,498 react-map-gl

12,206 react-mapbox-gl





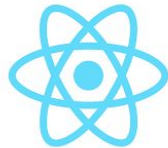
Blueprint v3 ▾
[View on GitHub](#)



d3-geo



React Components & Props



- What are components
 - Modular and composable
 - Life cycle
 - State
- Props are used to pass data into components
- What is JSX (JavaScript XML - eXtensible Markup Language)
 - HTML inside of JavaScript
- Component Library

create-react-app CLI

excellent documentation:

<https://facebook.github.io/create-react-app/docs/getting-started>

<https://github.com/facebook/create-react-app>

```
my-app
├── README.md
├── node_modules
├── package.json
├── .gitignore
├── public
│   ├── favicon.ico
│   ├── index.html
│   └── manifest.json
└── src
    ├── App.css
    ├── App.js
    ├── App.test.js
    ├── index.css
    ├── index.js
    ├── logo.svg
    └── serviceWorker.js
```

Spatial Data Types

- Vector
 - Point
 - Line
 - Polygon
- Raster
 - Satellite imagery
 - DEM (Digital Elevation Model)

Geojson

<https://tools.ietf.org/html/rfc7946#section-1.5>

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Panjiva Data

Ports

-points

Connections

-lineStrings

Countries:

-polygons

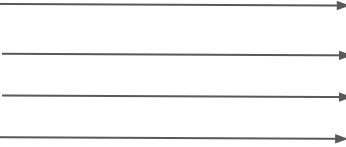
```
{
  "type": "FeatureCollection",
  "features": [
    {
      "type": "Feature",
      "geometry": {
        "type": "Point",
        "coordinates": [
          121.570544242859,
          31.378151596104
        ]
      },
      "properties": {
        "name": "Shanghai"
      }
    },
    {
      "type": "Feature",
      "geometry": {
        "type": "Point",
        "coordinates": [
          114.267878754934,
          22.5791641531934
        ]
      },
      "properties": {
        "name": "Yantian"
      }
    }
  ],
}
```

```
{
  "type": "FeatureCollection",
  "properties": {
    "maxDistance": 19849.371876056928,
    "maxShipments": 3014725
  },
  "features": [
    {
      "type": "Feature",
      "geometry": {
        "type": "LineString",
        "coordinates": [
          [
            -118.155791759491,
            33.8126087987519
          ],
          [
            121.570544242859,
            31.378151596104
          ]
        ]
      },
      "properties": {
        "distance": 10440.191868488895,
        "eastWest": true,
        "totalShipments": 3014725,
        "from": "Port of Long Beach",
        "fromCountry": "USA",
        "to": "Shanghai",
        "toCountry": "CHN",
        "toCountryCentroid": [
          105.93390225630252,
          36.60488268907564
        ],
        "fromCountryCentroid": [
          -120.63441560508083,
          45.11579279676678
        ]
      }
    }
  ],
}
```

SVG Path

<https://developer.mozilla.org/en-US/docs/Web/SVG/Tutorial/Paths>

Dependencies
Dependency manifest
Github config
Website contents



```
port-network
| node_modules
| package.json
| .gitignore
| public
|   | favicon.ico
|   | index.html
|   | manifest.json
|   | src
|   |   | App.css
|   |   | App.js
|   |   | App.test.js
|   |   | D3Map.js
|   |   | Dashboard.js
|   |   | DeckMap.js
|   |   | Data ...
|   |   | App.css
|   |   | index.css
|   |   | index.js
|   |   | logo.svg + logo.png
|   |   | serviceWorker.js
```

Generated:

- Index.js, the script that decorates the document inside of index.html
- App.js lives in index.js

Written:

- dashboard with filter
- 2 maps

Code along?

- We have a lot to cover so don't feel you have to write everything along with me
- There will be points where you can catch up with the development process

codesandbox.io/s/j3kjl22krv