

Mapping with Leaflet

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The JS API is a framework for building GIS apps

- Defines the what you can do and tells you how to do it
- Dojo is the framework, the JS API is the library
- API is overly complex and non-intuitive (for non-GIS)
- Diffucult to seperate Dojo from the JS API

Leaflet

- Open source mapping library
- Focused on a small (33kb), extensible API
- Simple and clear API
- Huge plugin eco system

```
// create a map in the "map" div, set the view to a given lat/lon
var map = L.map('map').setView([ 33.8253818684, -116.5369606018], 15);

// add tiles from OpenStreetMap
L.tileLayer('http://{s}.tile.osm.org/{z}/{x}/{y}.png', {
  attribution: '© <a href="http://osm.org/copyright">OpenStreetMap contributors, <br/>Imagery © Mapbox, Imagery © Mapbox, Imagery © Mapbox'
}).addTo(map);
```

```
// create a marker and add it to the map
var marker = new L.Marker([ 33.82538186847268, -116.5369606018

// create a polygon and add it to the map
var polygon = new L.Polygon([[33.82667422214127, -116.539449691
```



```
// bind a popup to our marker  
marker.bindPopup("<p>Welome to Dev Summit!<p>");
```

```
// listen for click events on the polygon
polygon.on("click", function(e){
    alert("You clicked on the polygon at " + e.latlng);
});
```

Leaflets API

- Simple - Uses Lat/Lng everywhere, no projections
- Literal - Obvious class and method names
- Consistent - Strict adherence to its own standards
- Fully Featured - Styling, Popups, Events
- Extendable - Classes, events, lots of utilities

Plugins!

So many plugins...

- Drawing <https://github.com/Leaflet/Leaflet.draw>
- Heatmaps <https://github.com/Leaflet/Leaflet.heat>
- Clustering <https://github.com/Leaflet/Leaflet.markercluster>
- Labeling <https://github.com/Leaflet/Leaflet.label>
- Data Formats <https://github.com/mapbox/leaflet-omnivore>
- And More ... <http://leafletjs.com/plugins.html>

Esri Leaflet

Leaflet plugins for ArcGIS

```
// create a map
var map = new L.Map("map").setView([ 33.8253818684, -116.536960

// add an ArcGIS Basemap
var tiles = L.esri.basemapLayer("Topographic").addTo(map);
```

```
// create a map
var map = L.map('map').setView([46.3, -60.7], 9);

// add a tile layer from ArcGIS Online or ArcGIS Server
var charts = new L.esri.TiledMapLayer("http://services.arcgis.com");
```



```
var map = L.map('map').setView([36.272228, -116.817001], 7);  
  
L.esri.basemapLayer("Gray").addTo(map);  
  
var parks = new L.esri.DynamicMapLayer("http://mapservices.nps
```

```
L.esri.featureLayer("http://services.arcgis.com/r0o16HdIMeOBI4M  
style: function (feature) {  
    return { color: "#70ca49", weight: 2 };  
},  
onEachFeature: function (feature, layer) {  
    layer.bindPopup(feature.properties.NAME + "<br>" + feature  
    }  
}).addTo(map);
```

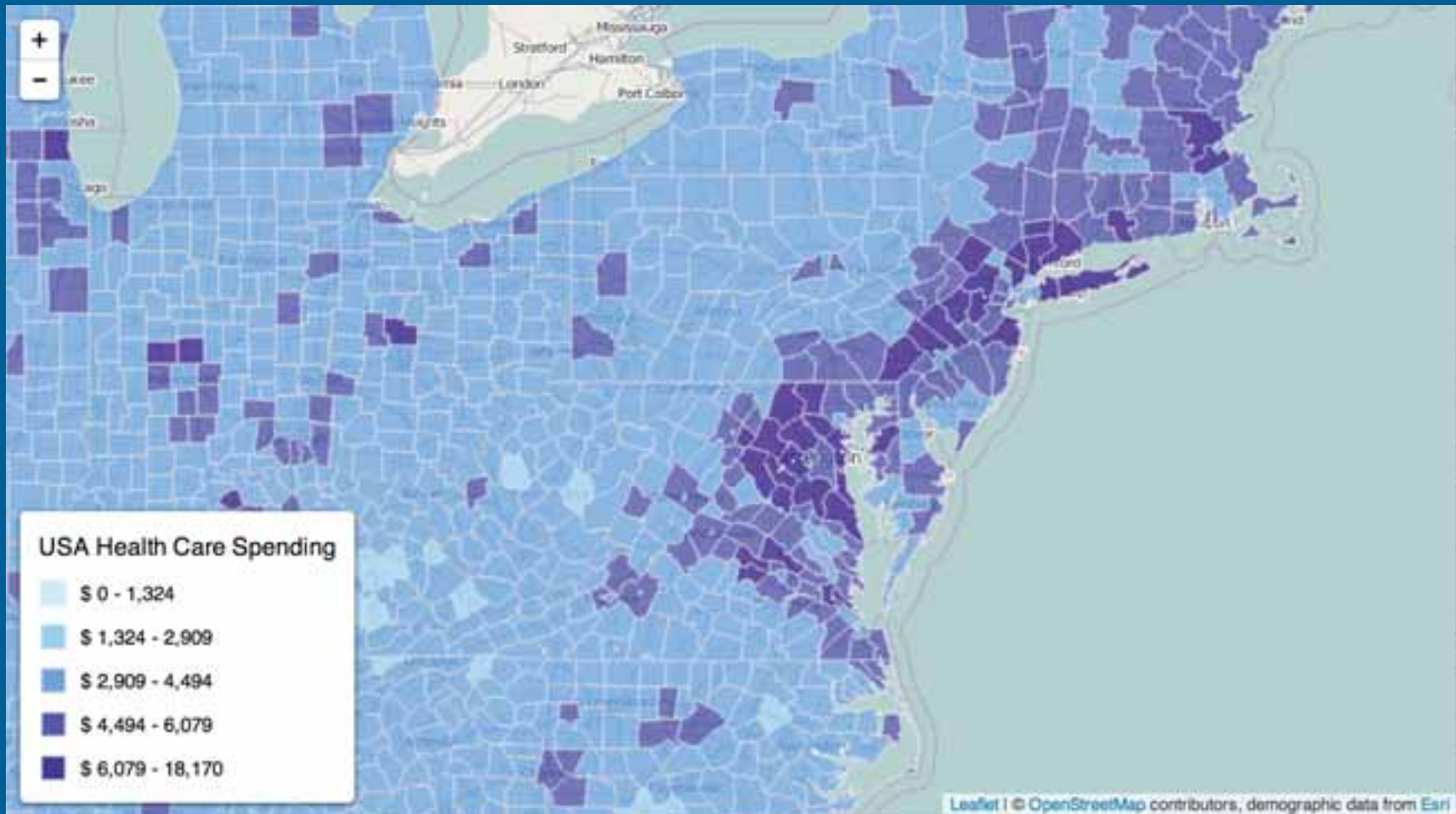
```
L.esri.clusteringFeatureLayer("http://services.arcgis.com/r0o16E  
onEachMarker: function(feature, marker) {  
    marker.bindPopup(feature.properties.stop_name+"<br>Stop ID  
}  
}).addTo(map);
```

```
var heat = new L.esri.HeatMapFeatureLayer("http://services.arcg  
    radius: 12  
}).addTo(map);
```

```
var searchControl = new L.esri.Controls.Geosearch().addTo(map)

// listen for the results event and add every result to the map
searchControl.on("results", function(e){
  console.log(e.results);
});
```

```
var layer = L.esri.Demographics.demographicLayer('USAHealthCare',  
    token: "A ArcGIS Online Token"  
).addTo(map);
```



Esri Leaflet

- Supports a wide variety of ArcGIS Services
- Clean Simple API
- Growing Fast
- Open Source

Smackdown!

Who Wins?

No One

Good developers choose the right
tools for the project

Choose Esri Leaflet if you...

- are integrating into existing apps
- are already using Leaflet
- want a simpler focused toolset
- want to leverage non-ArcGIS Services or data
- want to leverage Leaflet Plugins

