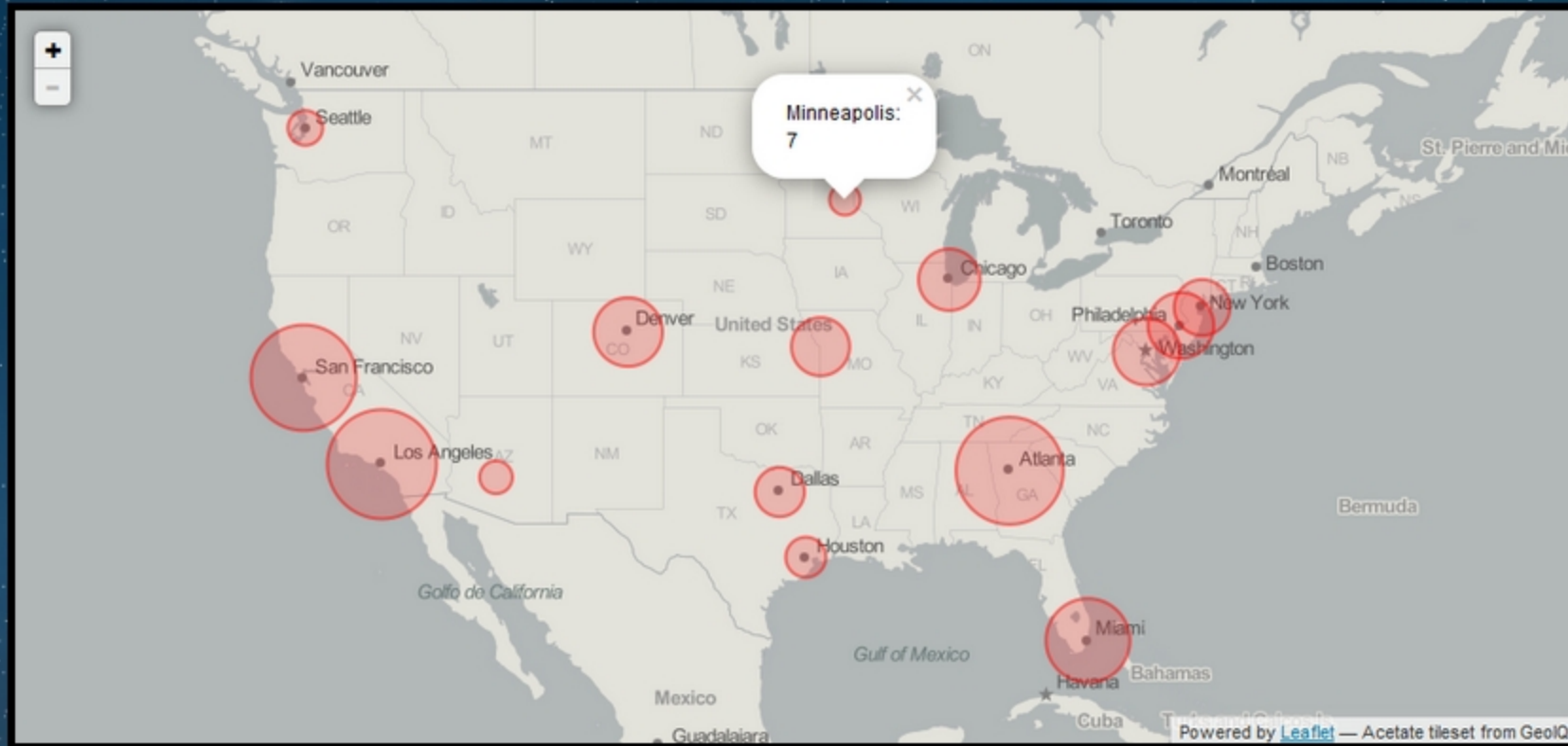


# Zero to Mashup

...in 1200 seconds flat



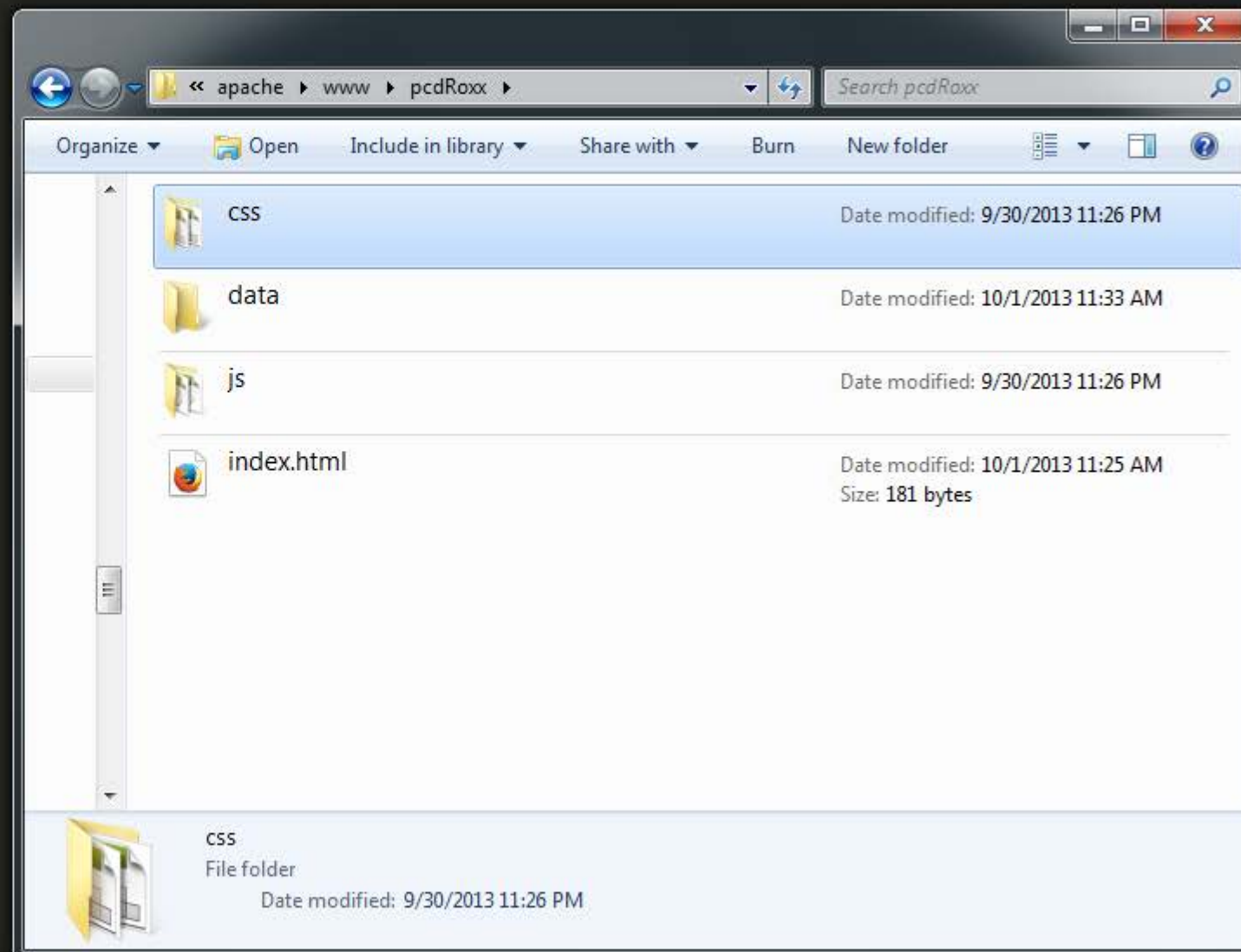
**Carl Sack**, [cmsack@wisc.edu](mailto:cmsack@wisc.edu)

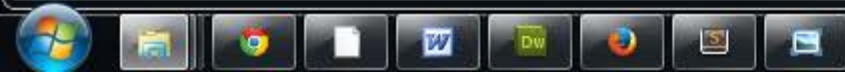
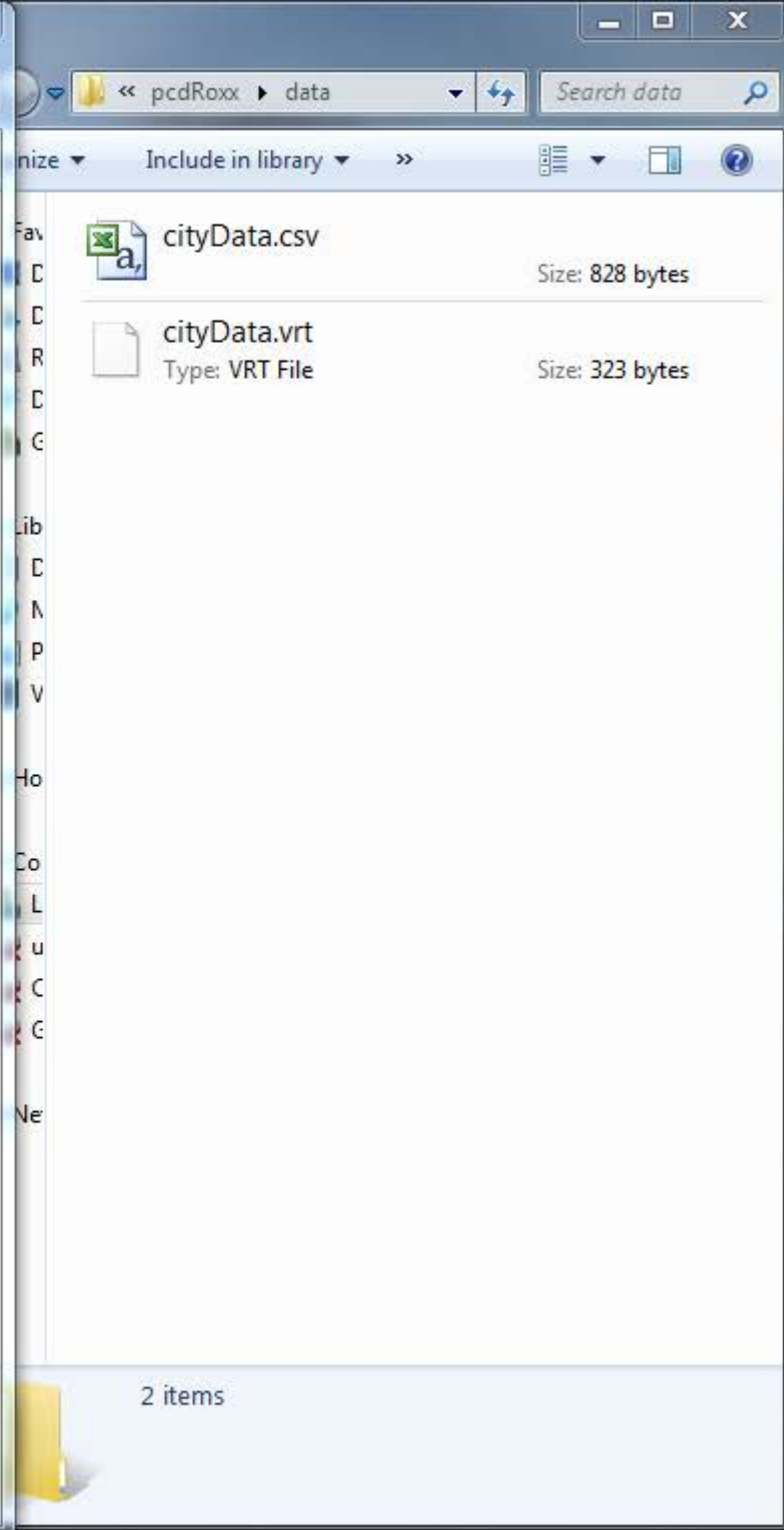
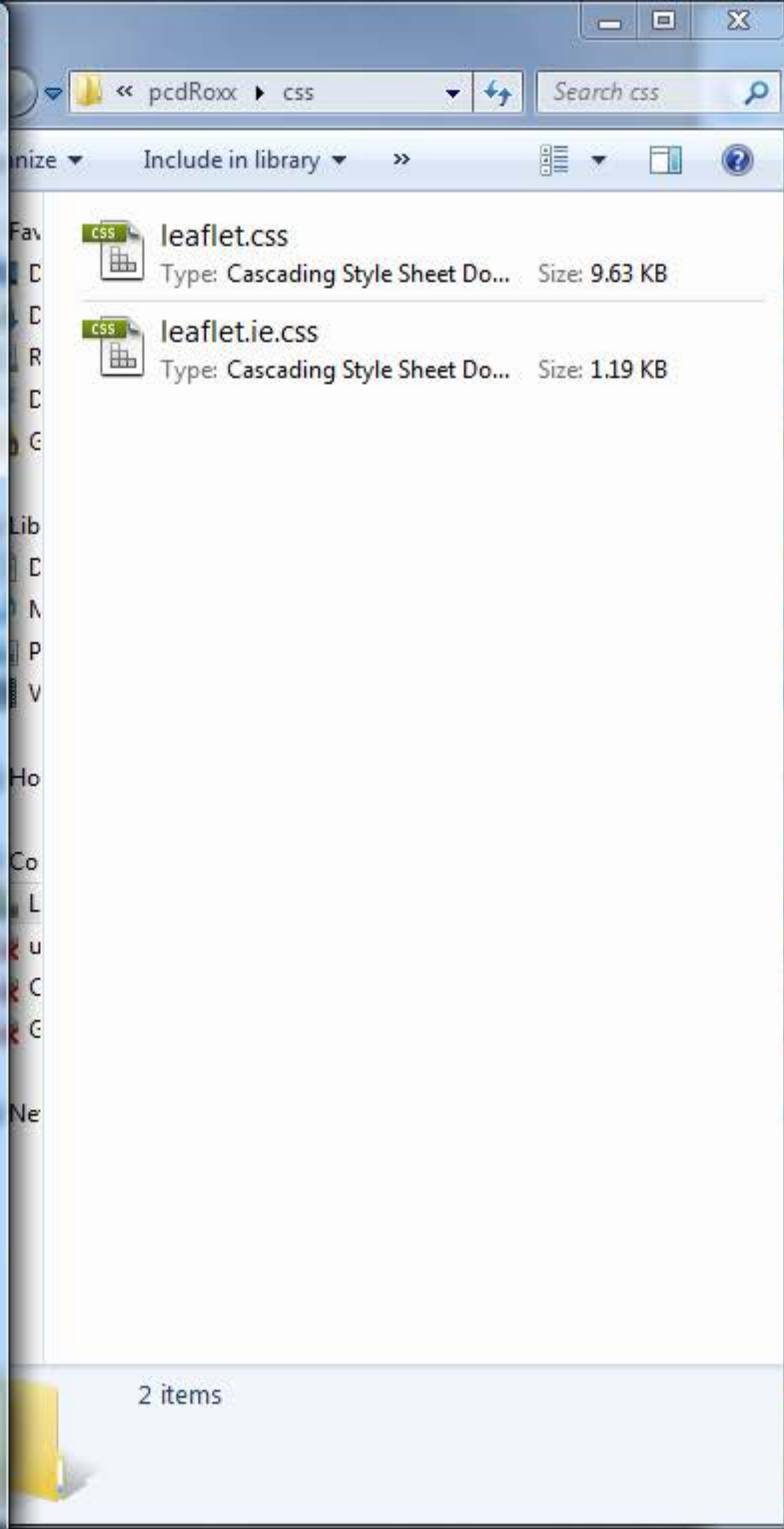
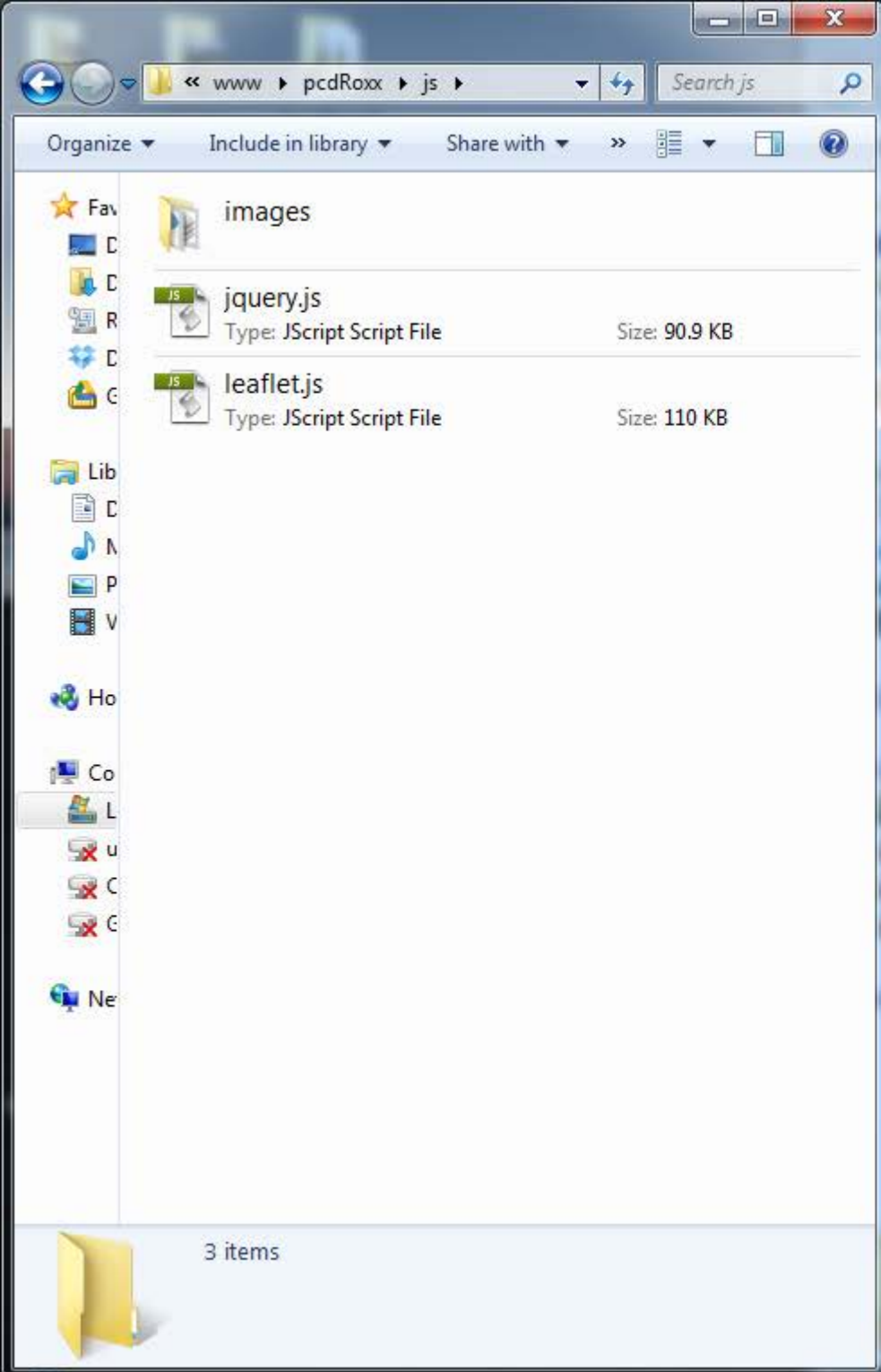
**Richard Donohue**, [rgdonohue@wisc.edu](mailto:rgdonohue@wisc.edu)

**Robert Roth**, [rooth@wisc.edu](mailto:rooth@wisc.edu)

index.html

```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4     <meta charset="utf-8">
5     <title></title>
6
7     <meta name="viewport" content="width=device-width">
8
9 </head>
10
11 <body>
12
13 </body>
14 </html>
```







index.html

```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4     <meta charset="utf-8">
5     <title></title>
6
7     <meta name="viewport" content="width=device-width">
8
9     <link rel="stylesheet" href="css/leaflet.css">
10    <!--[if IE]>
11        <link rel="stylesheet" href="css/leaflet.ie.css">
12    <![endif]-->
13
14 </head>
15
16 <body>
17
18     <script src="js/jquery.js"></script>
19     <script src="js/leaflet.js"></script>
20
21 </body>
22 </html>
```

index.html

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10    <!--[if IE]>
11        <link rel="stylesheet" href="css/leaflet.ie.css">
12    <![endif]-->
13
14 </head>
15
16 <body>
17
18     <div id="wrapper">
19         <h1>PCD Proportional Symbol Map in Leaflet</h1>
20         <div id="map"></div>
21     </div>
22
23     <script src="js/jquery.js"></script>
24     <script src="js/leaflet.js"></script>
25
26 </body>
27 </html>
```

index.html

```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4     <meta charset="utf-8">
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9     <link rel="stylesheet" href="css/leaflet.css">
10    <!--[if IE]>
11        <link rel="stylesheet" href="css/leaflet.ie.css">
12    <![endif]-->
13
14 </head>
15
16 <body>
17
18     <style>
19         body {
20             font-family: sans-serif;
21         }
22         #wrapper {
23             width: 960px;
24             margin: 15px auto;
25         }
26         #map {
27             width: 100%;
28             height: 450px;
29             margin: 15px;
30         }
31
32     </style>
33
34     <div id="wrapper">
35         <h1>PCD Proportional Symbol Map in Leaflet</h1>
36         <div id="map"></div>
37     </div>
38
39     <script src="js/jquery.js"></script>
40     <script src="js/leaflet.js"></script>
41
42 </body>
```



index.html

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15
16 <body>
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20       font-family: sans-serif;
21     }
22     #wrapper {
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24       margin: 15px auto;
25     }
26     #map {
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28       height: 450px;
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38
39   <script src="js/jquery.js"></script>
40   <script src="js/leaflet.js"></script>
41
42   <script>
43     $(document).ready(function(){
44       var map,
45         cities,
46         tiles;
47
48       map = L.map('map');
49
50     })
51
52   </script>
53
54 </body>
55 </html>
```

index.html

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21     }
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44         var map,
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48         map = L.map('map');
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50         tiles = L.tileLayer(
51             'http://{s}.acetate.geoiq.com/tiles/acetate/{z}/{x}/{y}.png',
52             {
53                 attribution: 'Acetate tileset from GeoIQ'
54             }).addTo(map);
55
56     })
57
58 </script>
59
60 </body>
61 </html>
```



```
21     }
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41
42 <script>
43     $(document).ready(function(){
44         var map,
45             cities,
46             tiles;
47
48         map = L.map('map', {
49             center: [38, -96],
50             zoom: 4,
51             minZoom: 4
52         });
53
54         tiles = L.tileLayer(
55             'http://{s}.acetate.geoiq.com/tiles/acetate/{z}/{x}/{y}.png',
56             {
57                 attribution: 'Acetate tileset from GeoIQ'
58             }).addTo(map);
59
60     })
61
62 </script>
```

```
1 id,name,latitude,longitude,yr2005,yr2006,yr2007,yr2008,yr2009,yr2010,yr2011
2 1,Atlanta,33.7489,-84.3881,85,38,75,30,9,15,38
3 2,Chicago,41.85,-87.65,28,29,38,26,15,12,10
4 3,Dallas,32.7828,-96.8039,18,59,22,60,82,42,18
5 4,Denver,39.7392,-104.9842,35,45,31,26,14,9,15
6 5,Houston,29.7631,-95.3631,12,31,15,22,28,38,31
7 6,Kansas City,39.0997,-94.5783,25,50,25,25,25,25,100
8 7,Los Angeles,34.0522,-118.2428,88,46,56,15,12,25,46
9 8,Miami,25.7738,-80.1924,52,51,46,68,75,85,96
10 9,Minneapolis,44.98,-93.2636,7,12,18,11,9,9,4
11 10,New York,40.7142,-74.0064,23,18,16,24,26,28,30
12 11,Philadelphia,39.9522,-75.1642,32,28,29,25,22,15,8
13 12,Phoenix,33.4539,-112.0746,8,15,22,25,29,28,32
14 13,San Francisco,37.775,-122.4183,82,74,72,10,85,88,74
15 14,Seattle,47.6097,-122.3331,9,16,14,23,45,66,85
16 15,Washington,38.89,-77.03,33,45,68,96,102,82,74
17
```



index.html

cityData.vrt

```
1 <OGRVRTDataSource>
2   <OGRVRTLayer name="cityData">
3     <SrcDataSource>c:\data\pcd\cityData.csv</SrcDataSource>
4     <GeometryType>wkbPoint</GeometryType>
5     <LayerSRS>WGS84</LayerSRS>
6     <GeometryField encoding="PointFromColumns" x="Longitude" y="Latitude"/>
7   </OGRVRTLayer>
8 </OGRVRTDataSource>
```

Administrator: OSGeo4W Shell

```
C:\>ogr2ogr -f "GeoJSON" c:\data\pcd\cityData.json c:\data\pcd\cityData.vrt
```



```
1 {
2   "type": "FeatureCollection",
3
4   "features": [
5     { "type": "Feature", "properties": { "id": "1", "name": "Atlanta", "latitude": "33.75", "longitude": "-84.39",
        "yr2005": "85.00", "yr2006": "38.00", "yr2007": "75.00", "yr2008": "30.00", "yr2009": "9.00", "yr2010": "
        15.00", "yr2011": "38.00" }, "geometry": { "type": "Point", "coordinates": [ -84.39, 33.75 ] } }
6   ,
7     { "type": "Feature", "properties": { "id": "2", "name": "Chicago", "latitude": "41.85", "longitude": "-87.65",
        "yr2005": "28.00", "yr2006": "29.00", "yr2007": "38.00", "yr2008": "26.00", "yr2009": "15.00", "yr2010":
        "12.00", "yr2011": "10.00" }, "geometry": { "type": "Point", "coordinates": [ -87.65, 41.85 ] } }
8   ,
9     { "type": "Feature", "properties": { "id": "3", "name": "Dallas", "latitude": "32.78", "longitude": "-96.80",
        "yr2005": "18.00", "yr2006": "59.00", "yr2007": "22.00", "yr2008": "60.00", "yr2009": "82.00", "yr2010": "
        42.00", "yr2011": "18.00" }, "geometry": { "type": "Point", "coordinates": [ -96.8, 32.78 ] } }
10  ,
11    { "type": "Feature", "properties": { "id": "4", "name": "Denver", "latitude": "39.74", "longitude": "-104.98",
        "yr2005": "35.00", "yr2006": "45.00", "yr2007": "31.00", "yr2008": "26.00", "yr2009": "14.00", "yr2010":
        "9.00", "yr2011": "15.00" }, "geometry": { "type": "Point", "coordinates": [ -104.98, 39.74 ] } }
12  ,
13    { "type": "Feature", "properties": { "id": "5", "name": "Houston", "latitude": "29.76", "longitude": "-95.36",
        "yr2005": "12.00", "yr2006": "31.00", "yr2007": "15.00", "yr2008": "22.00", "yr2009": "28.00", "yr2010":
        "38.00", "yr2011": "31.00" }, "geometry": { "type": "Point", "coordinates": [ -95.36, 29.76 ] } }
14  ,
15    { "type": "Feature", "properties": { "id": "6", "name": "Kansas City", "latitude": "39.10", "longitude": "-94.
        58", "yr2005": "25.00", "yr2006": "50.00", "yr2007": "25.00", "yr2008": "25.00", "yr2009": "25.00", "
        yr2010": "25.00", "yr2011": "100.00" }, "geometry": { "type": "Point", "coordinates": [ -94.58, 39.1 ] } }
16  ,
17    { "type": "Feature", "properties": { "id": "7", "name": "Los Angeles", "latitude": "34.05", "longitude": "-118
        .24", "yr2005": "88.00", "yr2006": "46.00", "yr2007": "56.00", "yr2008": "15.00", "yr2009": "12.00", "
        yr2010": "25.00", "yr2011": "46.00" }, "geometry": { "type": "Point", "coordinates": [ -118.24, 34.05 ] } }
```



index.html

```
32 </style>
33
34 <div id="wrapper">
35   <h1>PCD Proportional Symbol Map in Leaflet</h1>
36   <div id="map"></div>
37 </div>
38
39 <script src="js/jquery.js"></script>
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49       center: [38, -96],
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51       minZoom: 4
52     });
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54     tiles = L.tileLayer(
55       'http://{s}.acetate.geoiq.com/tiles/acetate/{z}/{x}/{y}.png',
56       {
57         attribution: 'Acetate tileset from GeoIQ'
58       }).addTo(map);
59
60     $.getJSON("data/cityData.json")
61       .done(function(data) {
62
63       })
64
65   })
66
67 </script>
68
69 </body>
70 </html>
```

```
32 </style>
33
34 <div id="wrapper">
35   <h1>PCD Proportional Symbol Map in Leaflet</h1>
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56       {
57         attribution: 'Acetate tileset from GeoIQ'
58       }).addTo(map);
59
60     $.getJSON("data/cityData.json")
61       .done(function(data) {
62
63         L.geoJson(data).addTo(map);
64
65       })
66
67   })
68
69 </script>
70
71 </body>
72 </html>
```



```
32 </style>
33
34 <div id="wrapper">
35   <h1>PCD Proportional Symbol Map in Leaflet</h1>
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52     });
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55       'http://{s}.acetate.geoiq.com/tiles/acetate/{z}/{x}/{y}.png',
56       {
57         attribution: 'Acetate tileset from GeoIQ'
58       }).addTo(map);
59
60     $.getJSON("data/cityData.json")
61       .done(function(data) {
62
63         L.geoJson(data, {
64           onEachFeature: function(feature, layer){
65             layer.bindPopup(feature.properties.name);
66           }
67         }).addTo(map);
68
69       })
70
71   })
72
```

index.html

cityData.json

x

```
43 $(document).ready(function(){
44     var map,
45         cities,
46         tiles;
47
48     map = L.map('map', {
49         center: [38, -96],
50         zoom: 4,
51         minZoom: 4
52     });
53
54     tiles = L.tileLayer(
55         'http://{s}.acetate.geoiq.com/tiles/acetate/{z}/{x}/{y}.png',
56         {
57             attribution: 'Acetate tileset from GeoIQ'
58         }).addTo(map);
59
60     $.getJSON("data/cityData.json")
61     .done(function(data) {
62
63         L.geoJson(data, {
64             pointToLayer: function(feature, latlng){
65                 return L.circleMarker(latlng, {
66                     radius: 10,
67                     fillColor: "#ff0000",|
68                     color: "#ff0000"
69                 })
70             },
71             onEachFeature: function(feature, layer){
72                 layer.bindPopup(feature.properties.name);
73             }
74         }).addTo(map);
75
76     })
77
78 })
79
80 </script>
81
82 </body>
83 </html>
```



```
index.html  cityData.json
49         center: [38, -96],
50         zoom: 4,
51         minZoom: 4
52     });
53
54     tiles = L.tileLayer(
55         'http://{s}.acetate.geoiq.com/tiles/acetate/{z}/{x}/{y}.png',
56         {
57             attribution: 'Acetate tileset from GeoIQ'
58         }).addTo(map);
59
60     $.getJSON("data/cityData.json")
61         .done(function(data) {
62
63             L.geoJson(data, {
64                 pointToLayer: function(feature, latlng){
65                     return L.circleMarker(latlng, {
66                         radius: calcPropRadius(feature.properties.yr2005),
67                         fillColor: "#ff0000",
68                         color: "#ff0000"
69                     })
70                 },
71                 onEachFeature: function(feature, layer){
72                     layer.bindPopup(feature.properties.name);
73                 }
74             }).addTo(map);
75
76         });
77
78     function calcPropRadius(attributeValue){
79         var scaleFactor = 10;
80         var area = attributeValue * scaleFactor;
81         return Math.sqrt(area/Math.PI)*2;
82     }
83
84     })
85
86 </script>
87
88 </body>
89 </html>
```



