

```

extends layout

// File: ./views/index.pug

block content
  if title
    h1= title
  if dataset
    h3= 'Displaying data for the ' + dataset + ' dataset.'

  h3= 'Legend'
  ul
    li 'STREET CRIMES - Blue/Light Blue'
    li 'OTHER - Orange/Yellow'
    li 'MOTOR VEHICLE THEFT - Green/Light Green'
    li 'BURGLARY - Red/Light Red'

  div(id='mapid', style='height: 600px;')

  script.
    async function fetchCrimeData () {
      let response = await fetch('http://localhost:3000/crime-data');

      let crimes = await response.json();

      return crimes;
    }

    fetchCrimeData()
      .then(function(crimes) {
        // get a reference to the map, center on portland oregon
        var map = L.map('mapid', {
          preferCanvas: true
        }).setView([45.5122, -122.6587], 8);

        L.tileLayer('https://api.tiles.mapbox.com/v4/{id}/{z}/{x}
/{y}.png?access_token={accessToken}', {
          attribution: 'Map data &copy; <a
href="https://www.openstreetmap.org/">OpenStreetMap</a> contributors, <a
href="https://creativecommons.org/licenses/by-sa/2.0/">CC-BY-SA</a>, Imagery © <a
href="https://www.mapbox.com/">Mapbox</a>',
          maxZoom: 18,
          id: 'mapbox.streets',
          accessToken:
'pk.eyJ1Ijoiz29sbHVtMTgiLCJhIjoiy2pzOTlrMnhjMG80cTQ5bWthdm5hcHBkNSJ9.1kg02j2VxLXwgpvIAj3BQ'
        }).addTo(map);

        // the original projection for portland oregon
        var fromProj =
'PROJCS["NAD_1983_HARN_StatePlane_Oregon_North_FIPS_3601_Feet_Intl",GEOGCS["GCS_North_American_1983_HARN",DATUM["D_North_American_1983_HARN",SPHEROID["GRS_1980",6378137.0,298.257222101]],PRIMEM["Greenwich",0.0],UNIT["Degree",0.017453292519943295]],PROJECTION["Lambert_Conformal_Conic"],PARAMETER["False_Easting",8202099.737532808],PARAMETER["False

```

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    Northing",0.0],PARAMETER["Central_Meridian",-
    120.5],PARAMETER["Standard_Parallel_1",44.33333333333334],PARAMETER["Standard_Parallel_
    2",46.0],PARAMETER["Latitude_Of_Origin",43.66666666666666],UNIT["Foot",0.3048]]';
45      // the projection for global lat/lng degrees
46      var toProj =
    'GEOGCS["GCS_WGS_1984",DATUM["D_WGS_1984",SPHEROID["WGS_1984",6378137,298.257223563]],PR
    OJCRS["Greenwich",0],UNIT["Degree",0.017453292519943295]]';
47
48      // holds markers created in the next step so we can load them all onto
the marker layer at once
49      var markers = [];
50
51      // Project the coordinates from the local coordinates to geo-spatial
latitude longitude pairs
52      // ideally, this should be done at the server before the data is sent
over, but it seems to work fine for me right now
53      for (var i = 0; i < crimes.length; i++) {
54          var x = crimes[i].x_coordinate;
55          var y = crimes[i].y_coordinate;
56
57          // use proj4.js to convert the coordinates to latitude/longitude
pairs
58          var proj = proj4(fromProj, toProj, [x, y]);
59
60          // create the lat lng
61          // for some reason I had to flip the lat/lng to get the markers to
render in the correct place
62          var ll = L.latLng(proj[1], proj[0]);
63
64          // determine the color of the circle based on the category of the
crime
65          var ccolor, fcolor;
66          if (crimes[i].category == 'STREET CRIMES') {
67              ccolor = '#0000FF'; // blue
68              fcolor = '#ADD8E6'; // light blue
69          } else if (crimes[i].category == 'BURGLARY') {
70              ccolor = '#FF0000'; // red
71              fcolor = '#CD5C5C'; // light red
72          } else if (crimes[i].category == 'MOTOR VEHICLE THEFT') {
73              ccolor = '#008000'; // green
74              fcolor = '#90EE90'; // light green
75          } else {
76              ccolor = '#FFA500'; // orange
77              fcolor = '#FFA000'; // yellow
78          }
79
80          // create the circle marker
81          var cm = L.circleMarker(ll, {
82              color: ccolor,
83              fillColor: fcolor,
84              fillOpacity: 0.5,
85              radius: 5
86          });
87
88          // plot the lat/lng on the map
```

```
89         markers.push(cm);
90     }
91
92     // Add the marker layer to the map
93     L.layerGroup(markers).addTo(map);
94 })
95
```

