

Week 4 - Module 2a - Web-based Mapping Clients. Google Maps API (pt. 2)

Overview

- Additional Google Maps API Capabilities to be Aware of
 - Styling of the base maps with custom preferences
 - Fusion Tables
- Bringing it all together in a “real” web page

Getting Started with Styled Maps - Video

[Styled Maps Documentation](#) | [Styled Maps Wizard](#)

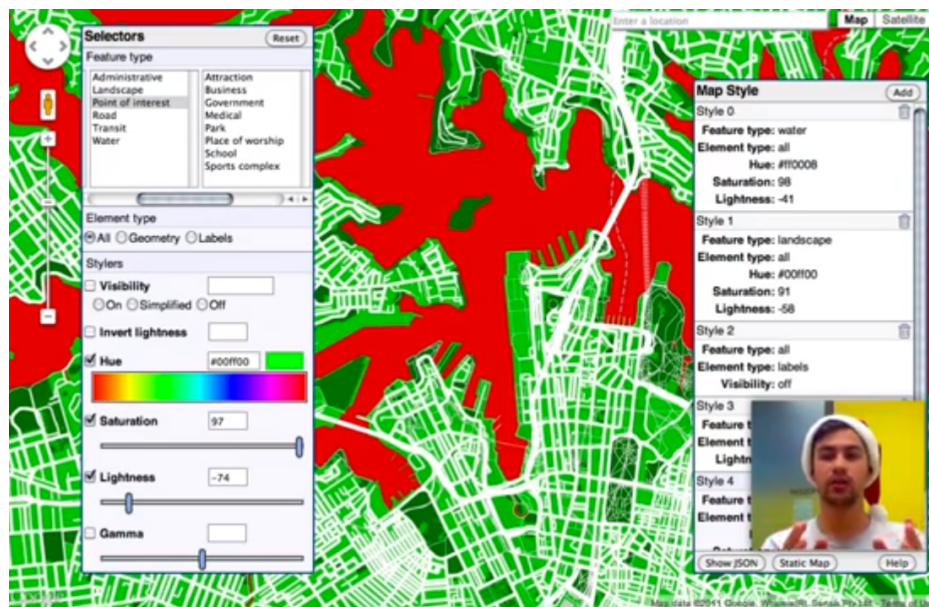


Figure 1: Google Maps Styled Maps Wizard [link](#)

Map Example: Simple - Styled

gmap_styled.html

```
1 <!DOCTYPE html>
2 <html>
3   <head>
4     <link rel="stylesheet" type="text/css" href="css/mapPage.css">
5   </head>
6
7   <body>
8     <h1>Sample Map - Styled (POIs Highlighted)</h1>
9     <div id="map_canvas"></div>
10
```

```

11      <!-- Let's put our JavaScript down here ----->
12      <!-- Load the external JavaScript file with the map definition code -->
13      <script src="js/mapPage_styled.js"></script>
14
15      <!-- Load the API in asynchronous mode and execute the initialize function when done -->
16      <!-- The optional 'key-<API Key>' parameter is not used here but should be for a production map -->
17      <script async defer
18          src="https://maps.googleapis.com/maps/api/js?callback=initialize">
19      </script>
20  </body>
21 </html>

```

mapPage_styled.js

```

1  function initialize() {
2      var classroom = new google.maps.LatLng(35.084280,-106.624073)
3      var myOptions = {
4          zoom: 8,
5          center: classroom,
6          mapTypeId: google.maps.MapTypeId.ROADMAP,
7          styles: [
8              {
9                  featureType: "water",
10                 stylers: [
11                     { visibility: "on" },
12                     { hue: "#0008ff" }
13                 ]
14             },{
15                 featureType: "road.highway",
16                 stylers: [
17                     { hue: "#ff1a00" }
18                 ]
19             },{
20                 featureType: "road.arterial",
21                 stylers: [
22                     { hue: "#ffa200" },
23                     { visibility: "simplified" }
24                 ]
25             },{
26                 featureType: "road.local",
27                 stylers: [
28                     { visibility: "off" }
29                 ]
30             },{
31                 featureType: "administrative",
32                 stylers: [
33                     { visibility: "simplified" }
34                 ]
35             },{
36                 featureType: "poi",
37                 stylers: [
38                     { visibility: "on" },
39                     { hue: "#00ffff" }
40                 ]

```

```

41     },{
42         featureType: "poi",
43         stylers: [
44             { visibility: "on" }
45         ]
46     }
47 ]
48
49 };
50 var map = new google.maps.Map(
51     document.getElementById("map_canvas"),
52     myOptions);
53 }

```

Google I/O 2011: Managing and visualizing your geospatial data with Fusion Tables - Video

Some particularly relevant sections: [Introduction \(0:00 - 10:30\)](#) | [Google Maps API Integration \(21:40 - 34:42\)](#) | [Summary and Links \(52:00 - 52:40\)](#)

[Fusion Tables Documentation/Help](#)

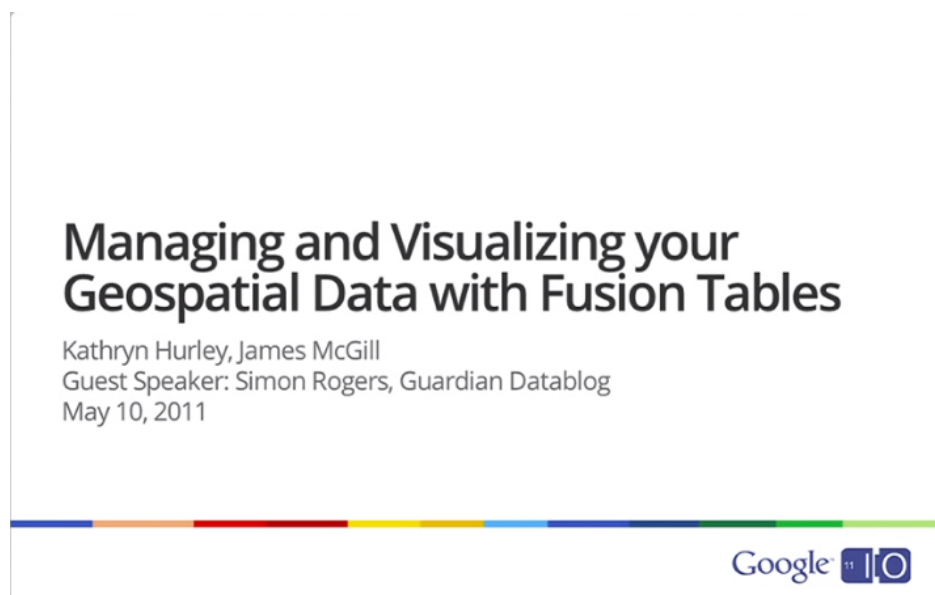


Figure 2: Google Fusion Tables Introduction Video [link](#)

Bringing It All Together

gmaps_events.html

```

1  <!DOCTYPE html>
2  <html>
3      <head>
4          <link rel="stylesheet" type="text/css" href="css/event_mapPage.css">
5          <title>Karl's Event Diary</title>
6      </head>

```

```

7
8 <body>
9   <h1>My diary of endurance events that I've participated in since joining Team in Training
10  </h1>
11
12   <p>In 2008 Cynthia and I joined the Leukemia and Lymphoma Society's
13   (<a href="http://www.lls.org/">LLS</a>) Team in Training
14   (<a href="http://www.teamintraining.org/">TNT</a>,
15   <a href="http://youtu.be/GMSKG8L6K78">info video</a>) program as
16   participants to train for the Animas Valley/Steamworks Half Marathon
17   and raise money for blood cancer research and patient services. In spite of
18   our not having any direct connection to blood cancer (at that time),
19   we found the goals of LLS admirable, the combined training and fund-raising
20   program of TNT a great idea, and have made many new friends over the many
21   seasons that we've been involved with TNT.</p>
22
23   <p>From 2008 through early 2015 we continued to volunteer with TNT, as
24   participants, mentors, and since 2010 I was a coach (check out my
25   <a href="http://youtu.be/GMSKG8L6K78#t=2m13s">half-second</a> of fame in the
26   info video) for TNT with an emphasis on training walkers for full- or
27   half-marathons. This page provides a summary of the events that I've participated
28   in in some capacity since we became involved with TNT. </p>
29
30   <div id="event-map" name="event-map"></div>
31
32   <h2>
33     <span class="date">11/13/2015</span>
34     Avengers Half Marathon
35     <span class="time">3:17:55</span>
36     (<a href="#event-map" onclick="recenter(map, eventPlaces[5].point, 12)">map</a>)
37   </h2>
38
39   <h2>
40     <span class="date">1/11/2015</span>
41     Disney World Marathon (Goofy - Day 2)
42     <span class="time">6:21:01</span>
43     (<a href="#event-map" onclick="recenter(map, eventPlaces[4].point, 10)">map</a>)
44   </h2>
45   <p class="eventDescription">blah, blah, blah ...</p>
46
47   <h2>
48     <span class="date">1/10/2015</span>
49     Disney World Half Marathon (Goofy - Day 1)
50     <span class="time">2:45:55</span>
51     (<a href="#event-map" onclick="recenter(map, eventPlaces[4].point, 10)">map</a>)
52   </h2>
53   <h2>
54     <span class="date">10/19/2014</span>
55     Duke City Half Marathon
56     <span class="time">2:45:17</span>
57     (<a href="#event-map" onclick="recenter(map, eventPlaces[0].point, 11)">map</a>)
58   </h2>
59   <p class="eventDescription">blah, blah, blah ...</p>
60   <h2>

```

```

61         <span class="date">2/23/2014</span>
62         Princess Half Marathon
63         <span class="time">3:07:11</span>
64         (<a href="#event-map" onclick="recenter(map, eventPlaces[4].point, 10)">map</a>)
65     </h2>
66     <h2>
67         <span class="date">2/22/2014</span>
68         Princess Enchanted 10k
69         <span class="time">1:42:43</span>
70         (<a href="#event-map" onclick="recenter(map, eventPlaces[4].point, 10)">map</a>)
71     </h2>
72     <h2>
73         <span class="date">9/1/2013</span>
74         Disneyland Half Marathon
75         <span class="time">2:56:57</span>
76         (<a href="#event-map" onclick="recenter(map, eventPlaces[5].point, 12)">map</a>)
77     </h2>
78     <p class="eventDescription">blah, blah, blah ...</p>
79
80     <h2>
81         <span class="date">1/13/2013</span>
82         Disney World Marathon (Goofy - Day 2)
83         <span class="time">6:46:57</span>
84         (<a href="#event-map" onclick="recenter(map, eventPlaces[4].point, 10)">map</a>)
85     </h2>
86     <p class="eventDescription">blah, blah, blah ...</p>
87
88     <h2>
89         <span class="date">1/12/2013</span>
90         Disney World Half Marathon (Goofy - Day 1)
91         <span class="time">3:22:48</span>
92         (<a href="#event-map" onclick="recenter(map, eventPlaces[4].point, 10)">map</a>)
93     </h2>
94     <p class="eventDescription">blah, blah, blah ...</p>
95
96     <h2>
97         <span class="date">9/29/2012</span>
98         Hot Chocolate 15k
99         <span class="time">1:56:46</span>
100        (<a href="#event-map" onclick="recenter(map, eventPlaces[6].point, 10)">map</a>)
101    </h2>
102    <p class="eventDescription">blah, blah, blah ...</p>
103
104    <h2>
105        <span class="date">6/9/2012</span>
106        Animas Valley/Steamworks Half Marathon
107        <span class="time">no time: coached</span>
108        (<a href="#event-map" onclick="recenter(map, eventPlaces[1].point, 10)">map</a>)
109    </h2>
110    <p class="eventDescription">blah, blah, blah ...</p>
111
112    <h2>
113        <span class="date">1/9/2012</span>
114        Disney World Marathon (Goofy - Day 2)

```

```

115         <span class="time">6:56:28</span>
116         (<a href="#event-map" onclick="recenter(map, eventPlaces[4].point, 10)">map</a>)
117     </h2>
118     <p class="eventDescription">blah, blah, blah ...</p>
119
120     <h2>
121         <span class="date">1/8/2011</span>
122         Disney World Half Marathon (Goofy - Day 1)
123         <span class="time">3:29:00</span>
124         (<a href="#event-map" onclick="recenter(map, eventPlaces[4].point, 10)">map</a>)
125     </h2>
126     <p class="eventDescription">blah, blah, blah ...</p>
127
128     <h2>
129         <span class="date">6/19/2010</span>
130         Animas Valley/Steamworks Half Marathon
131         <span class="time">no time: coached</span>
132         (<a href="#event-map" onclick="recenter(map, eventPlaces[1].point, 10)">map</a>)
133     </h2>
134     <p class="eventDescription">blah, blah, blah ...</p>
135
136     <h2>
137         <span class="date">6/6/2010</span>
138         San Diego Rock 'n' Roll Marathon
139         <span class="time">no time: coached</span>
140         (<a href="#event-map" onclick="recenter(map, eventPlaces[2].point, 11)">map</a>)
141     </h2>
142     <p class="eventDescription">blah, blah, blah ...</p>
143
144     <h2>
145         <span class="date">10/18/09</span>
146         Nike Women's Marathon
147         <span class="time">7:13:05</span>
148         (<a href="#event-map" onclick="recenter(map, eventPlaces[3].point, 12)">map</a>)
149     </h2>
150     <p class="eventDescription">blah, blah, blah ...</p>
151
152     <h2>
153         <span class="date">9/6/2009</span>
154         Disneyland Half Marathon
155         <span class="time">3:43:05</span>
156         (<a href="#event-map" onclick="recenter(map, eventPlaces[5].point, 12)">map</a>)
157     </h2>
158     <p class="eventDescription">blah, blah, blah ...</p>
159
160     <h2>
161         <span class="date">1/11/2009</span>
162         Disney World Marathon
163         <span class="time">6:57:42</span>
164         (<a href="#event-map" onclick="recenter(map, eventPlaces[4].point, 10)">map</a>)
165     </h2>
166     <p class="eventDescription">blah, blah, blah ...</p>
167
168     <h2>

```

```

169         <span class="date">10/19/2008</span>
170         Duke City Half Marathon
171         <span class="time">3:09:42</span>
172         (<a href="#event-map" onclick="recenter(map, eventPlaces[0].point, 11)">map</a>)
173     </h2>
174     <p class="eventDescription">blah, blah, blah ...</p>
175
176     <h2>
177         <span class="date">6/21/2008</span>
178         Animas Valley/Steamworks Half Marathon
179         <span class="time">3:14:52</span>
180         (<a href="#event-map" onclick="recenter(map, eventPlaces[1].point, 10)">map</a>)
181     </h2>
182     <p class="eventDescription">blah, blah, blah ...</p>
183
184 </body>
185
186 <!-- Let's put our JavaScript down here ----->
187 <!-- Load the external JavaScript file with the map definition code -->
188 <script src="js/mapPage_events.js"></script>
189
190 <!-- Load the API in asynchronous mode and execute the initialize function
191      when done -->
192 <!-- The optional 'key-<API Key>' parameter is not used here but should
193      be for a production map -->
194 <script async defer
195      src="https://maps.googleapis.com/maps/api/js?callback=initialize">
196 </script>
197 </body>
198 </html>

```

gmaps_events.js

```

1  var map;
2  var eventPlaces;
3
4  function initialize() {
5      // Define a set of global coordinates for use throughout the web site
6      // Place coordinates derived from GNIS database: http://geonames.usgs.gov/pls/gnispublic
7      eventPlaces = [
8          {
9              name: "Albuquerque",
10             point: new google.maps.LatLng(35.0889356,-106.5747462),
11             label: "Albuquerque: Duke City Half Marathon"
12         },
13         {
14             name: "Durango",
15             point: new google.maps.LatLng(37.2752800,-107.8800667),
16             label: "Durango: Animas Valley/Steamworks Half Marathon"
17         },
18         {
19             name: "San Diego",
20             point: new google.maps.LatLng(32.7153292,-117.1572551),
21             label: "San Diego: San Diego Rock 'n' Roll Marathon"

```

```

22     },
23     {
24         name: "San Francisco",
25         point: new google.maps.LatLng(37.7749295,-122.4194155),
26         label: "San Francisco: Nike Women's Marathon"
27     },
28     {
29         name: "Orlando",
30         point: new google.maps.LatLng(28.5383355,-81.3792365),
31         label: "Orlando: Walt Disney World half- and full-marathon"
32     },
33     {
34         name: "Anaheim",
35         point: new google.maps.LatLng(33.8352932,-117.9145036),
36         label: "Anaheim: Disneyland Half Marathon"
37     },
38     {
39         name: "Albuquerque",
40         point: new google.maps.LatLng(35.0889356,-106.5747462),
41         label: "Hot Chocolate 15k"
42     }
43 ];
44
45
46 var myOptions = {
47     zoom: 4,
48     center: eventPlaces[0].point,
49     mapTypeId: google.maps.MapTypeId.ROADMAP};
50
51 map = new google.maps.Map(
52     document.getElementById("event-map"),
53     myOptions);
54
55 addMarkers(map,eventPlaces)
56 }
57
58 function recenter(mapName, latlon, zoomLevel) {
59     mapName.setCenter(latlon);
60     mapName.setZoom(zoomLevel)
61 }
62
63 function addMarkers(mapName, markerArray) {
64     for (index = 0; index < markerArray.length; index++) {
65         myMarker = new google.maps.Marker({
66             position: markerArray[index].point,
67             title: markerArray[index].label
68         });
69         myMarker.setMap(mapName)
70     }
71 }

```


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