For my final project in MAP673 I would like to create a county choropleth map that displays the total tickets per county in South Carolina. I work for a non-profit called South Carolina 811 (SC811) and we provide utility damage protection services to utility companies that operate within the state. We have about 60 employees, most of which are CSR’s, and a few IT folks like myself to keep the place running. When I refer to a ‘ticket’ I am describing what is created when someone calls our center to let us know where they’ll be excavating. Once a ticket is created based on the description from the excavator, we notify the utility companies in the area and they go out and mark with special spray paint where their lines sit physically so the excavator can have a reference. This map is going to be a visualization of how many of these tickets have been created per county.

I think the title of the map will be something simple like *Total Tickets per County*. My objectives in creating this map is to make a comparable solution to our current software of Tableau. I would like to demonstrate that we can accomplish the same (or better) result with an open technology stack. The users that would be using this map would be both the staff and public that use any of the SC811 services. They would be able to quickly identify what areas have the highest volume of tickets created. The source of my data is going to be our ticket information, which is currently stored in a PostGIS enabled database. I will perform the aggregation in the database and export the data to a .csv in order to make it work with this application. There will be four years’ worth of ticket information to represent.

The representation for this will be (as mentioned above) a choropleth map that is broken down per county in South Carolina. As I envision it, the UI will be split vertically with 100% height on both divs, a table that will take up 25-30% width and be anchored to the left, and the map pane will take up the remaining 70-75% of the width. Within the table I plan to have the county names and the total ticket counts for each. There are 46 counties in SC so depending on how much space that takes up, I will make a decision to make it a floating div and not take up 100% vertically. I would also like to make either a dropdown or a slider for the user to interact with. I’d be open to your suggestions? My thought is that it’s only four years so I didn’t think a slider would work best for that? I would like to make it so that both the table and the map filter based on the slider/dropdown. I will also have a Leaflet tiled basemap underneath the county polygons and maybe have a little bit of transparency to the polygons to minimize the contrast.

I will use QGIS to export a shapefile of the SC counties to GeoJSON. For the JavaScript I will use Papa Parse to read the csv into a JSON to that I can link it up with the counties. I will use Leaflet to create the counties layer and also to have a base map underneath it. I would try D3 but I don’t want to stack the deck too much against me. For the table div I am going to use Tabulator. I am very much looking forward to creating the table portion of it because this is one of the things I have struggled with in the past. As for the CSS, I don’t think I’ll use any of the frameworks, but if I do, it will probably be Bootstrap. I am going to try and host this on my Apache web server, I just need to get with the network guy at my work and go from there. If I can’t go that way, I’ll just put it on GitHub.