Test 2 Applied Portion

Due: March 9 by 3:30pm to Sakai

For the applied portion of Test 2, you will calculate the number of bus stops per 1000 people in census block groups in Chapel Hill and Carrboro. You will make a map that displays this block group value as well as the location of the bus stops. You should select appropriate symbology and a classification scheme for your map, as well as add appropriate map features.

You will submit a single .png map to Sakai. You will also submit a Word document or PDF with a paragraph describing your classification and symbology choices.

**Directions:**

1. Using the data in “data\_for\_join.csv”, normalize the number of bus stops by the population (per 1,000 people) and add this as a column in the dataset. The number of bus stops is denoted by the “Num\_Stops” column. The population is denoted by the “Pop\_2020” column.
2. Prepare “data\_for\_join.csv” for a join. Identify the appropriate key column (column that matches a column in “ChapelHill\_Carrboro\_BG.shp”) and make sure that the data is prepared for import into QGIS.
3. Import “data\_for\_join.csv” into QGIS and join it to “ChapelHill\_Carrboro\_BG.shp”.
4. Select an appropriate classification scheme and symbology to display the value you created (bus stops per 1,000 people) on the map.
5. Import the locations of bus stops into QGIS using the LAT and LONG columns in “bus\_stop\_locations\_carrborochapelhill.csv” and display these locations on the map using appropriate symbology.
6. Add appropriate map features. Your map should include a scale, a north, a legend, a title, and your name. Make sure that your legend does not have the default file name.
7. Write a brief paragraph that describes why you selected your classification scheme and your color scheme.

**Data Sources:**

* Census Block Group Shapefile from Census Tiger/Line Shapefiles (<https://www.census.gov/geographies/mapping-files/time-series/geo/tiger-line-file.html>)
* Bus Stops from Chapel Hill Open Data (<https://opendata-townofchapelhill.hub.arcgis.com/datasets/townofchapelhill::chapel-hill-transit-bus-stops/explore?location=35.923387%2C-79.041794%2C13.54>)
* Population Data from 2020 Census (<https://data.census.gov/>)