✔ Redistricting North Carolina
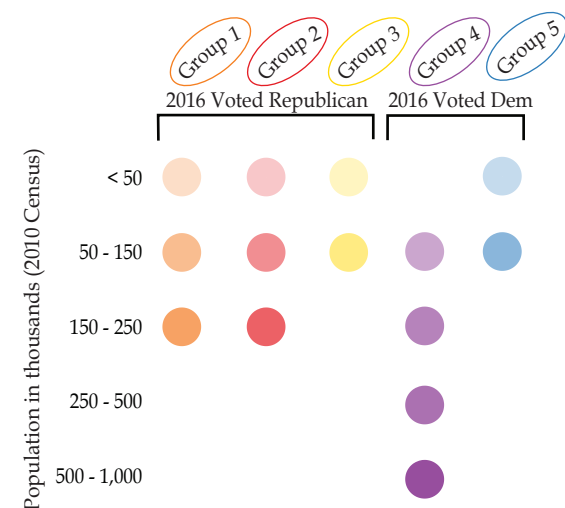
Method

☑ 1. Assign *colors* of counties based on *voting history*, *education* of county, median *age*, and median *income* using a statistical algorithm.*

☑ 2. Identify prominent patterns of colors in the geography.

☑ 3. Join neighboring counties, maintaining important patterns, keeping districts compact, and populations of districts equal; if needed, split counties by township.
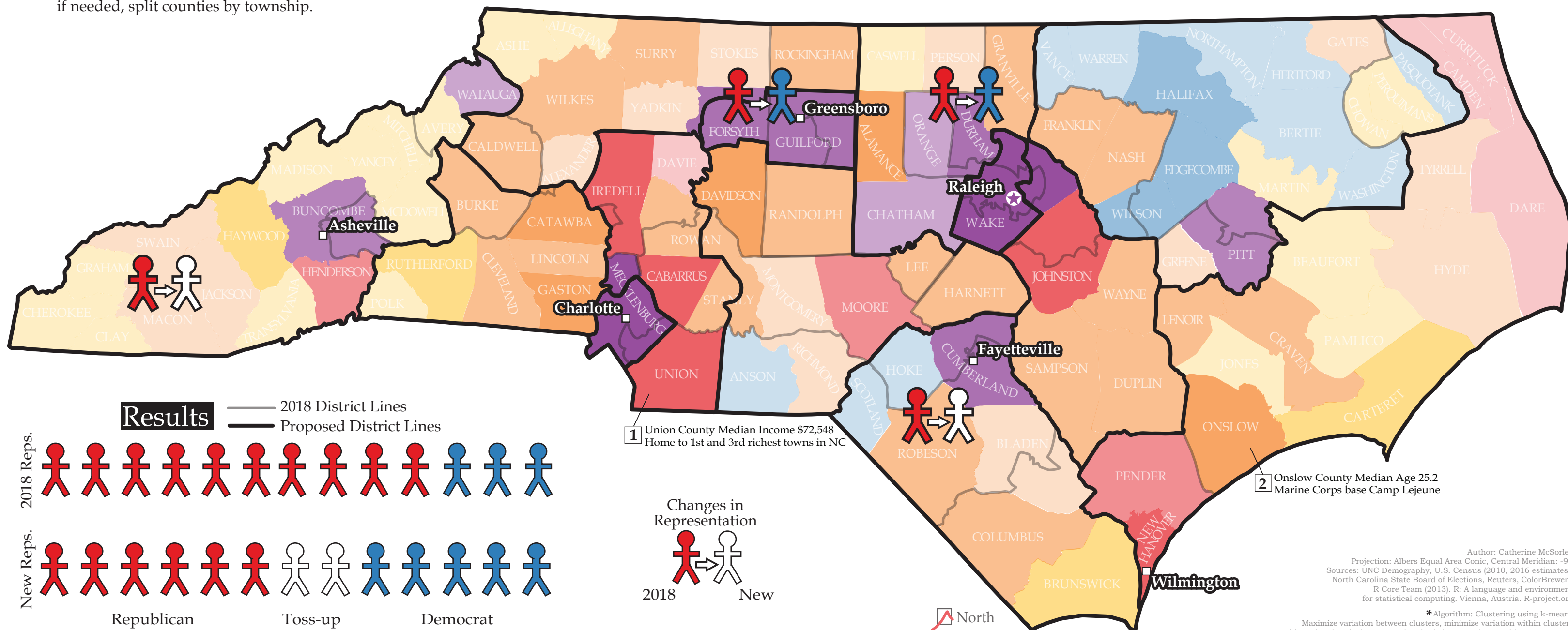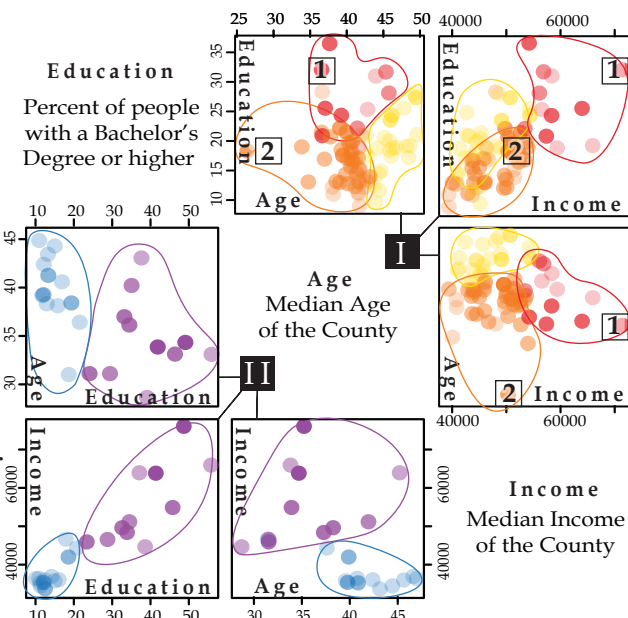
Overview

In 2018 Republican candidates won just 53 percent of the statewide vote while winning 10 out of the 13 districts. Such extreme partisan districting is unconstitutional and has been ruled illegal. North Carolina must now redistrict fairly and this is a proposed solution.

The graphs to the right show the demographics of the county groups used to create the new districts. Groups were made by similarity of demographics between counties, some of these similarities can be seen in the scatterplots. ie. Group 2 counties voted Republican, have higher education, higher income, and a median age.

Legend and Data

Group 1   Group 2   Group 3   Group 4   Group 5

2016 Voted Republican   2016 Voted Dem

Population in thousands (2010 Census)
< 50
50 - 150
150 - 250
250 - 500
500 - 1,000

Demographic data are represented to the right. Republican voting counties are represented in graphs labelled **I** Democratic counties are represented in graphs labelled **II**. Counties marked **1** & **2** are outliers.

Education — Percent of people with a Bachelor's Degree or higher

Age — Median Age of the County

Income — Median Income of the County

Results

—— 2018 District Lines
—— Proposed District Lines

2018 Reps.

New Reps.

Republican   Toss-up   Democrat

Changes in Representation

2018   New

1 Union County Median Income $72,548 Home to 1st and 3rd richest towns in NC

2 Onslow County Median Age 25.2 Marine Corps base Camp Lejeune

North

Author: Catherine McSorley
Projection: Albers Equal Area Conic, Central Meridian: -96
Sources: UNC Demography, U.S. Census (2010, 2016 estimates),
North Carolina State Board of Elections, Reuters, ColorBrewer2
R Core Team (2013), R: A language and environment
for statistical computing. Vienna, Austria. R-project.org

*Algorithm: Clustering using k-means
Maximize variation between clusters, minimize variation within clusters
K-means: partitions data into k clusters, each point belongs to cluster with nearest mean