

Week 1 Skillset

Main workflow

- A: Take a shapefile of your Basic Units and make a dual graph adjacency list
- B: Take a messy/noisy shapefile of a districting plan and "round off" into Basic Units equivalency (checking contiguity!)
- C: Take voting data in nonstandard units (given as shapefiles) and "prorate" into Basic Units CSV
- D: Run **markovchain** chains on your districting plan to build a local ensemble
- E: Produce p -values and histograms from your local ensembles

Related tasks

- ☞ A': From dual graph, produce many formats in which to interact with the graph
- ☞ B': Measure expected error from roundoff
- ☞ C': Measure expected error from proration
- ☞ D': Modifications to **markovchain** (new metrics, metagraph explore, Metropolis variant, ...)
- ☞ E': Build tools to report other information on ensemble (visualizations, record of flips, front end, ...)

GIS etc

- ✳ GIS1: Generate attribute list from shapefiles
- ✳ GIS2: From shapefiles, find shared perimeters
- ✳ GIS3: Compute Polsby-Popper scores
- ✳ GIS4: Build circumcircles, compute Reock scores
- ✳ GIS5: Write scripts to clean up Basic Units