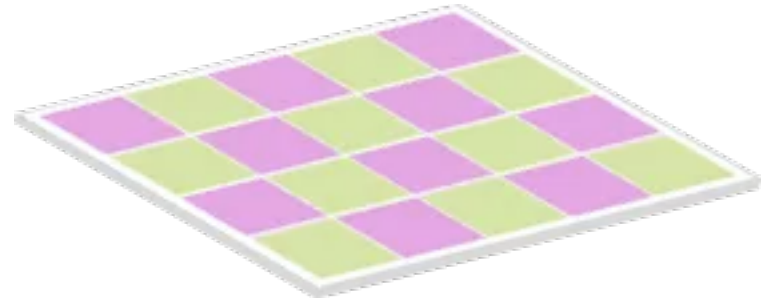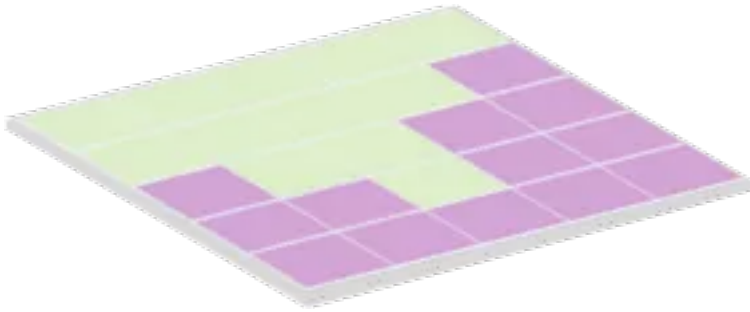# METHODS IN SPATIAL DATA ANALYSIS
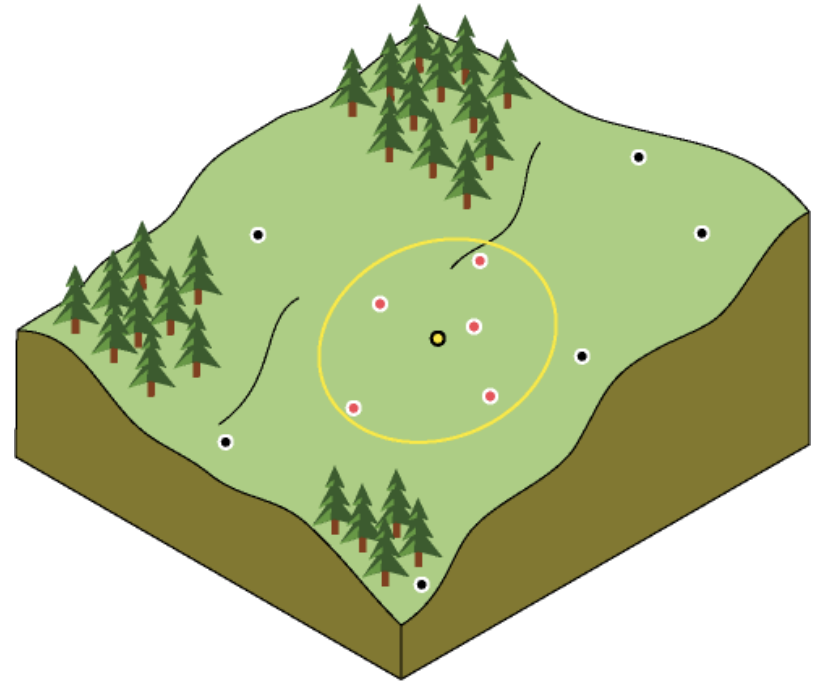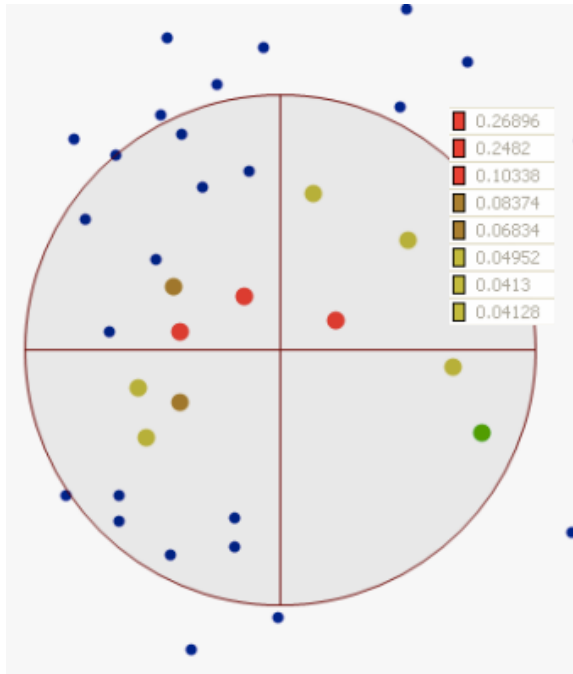
SPATIAL STATISTICS

+

REGRESSION MODELS

SPATIAL AUTOCORRELATION/MORAN'S I

- Ranges from -1 to 1
- Measures clustering of a variable in space
- Contiguity   Rank

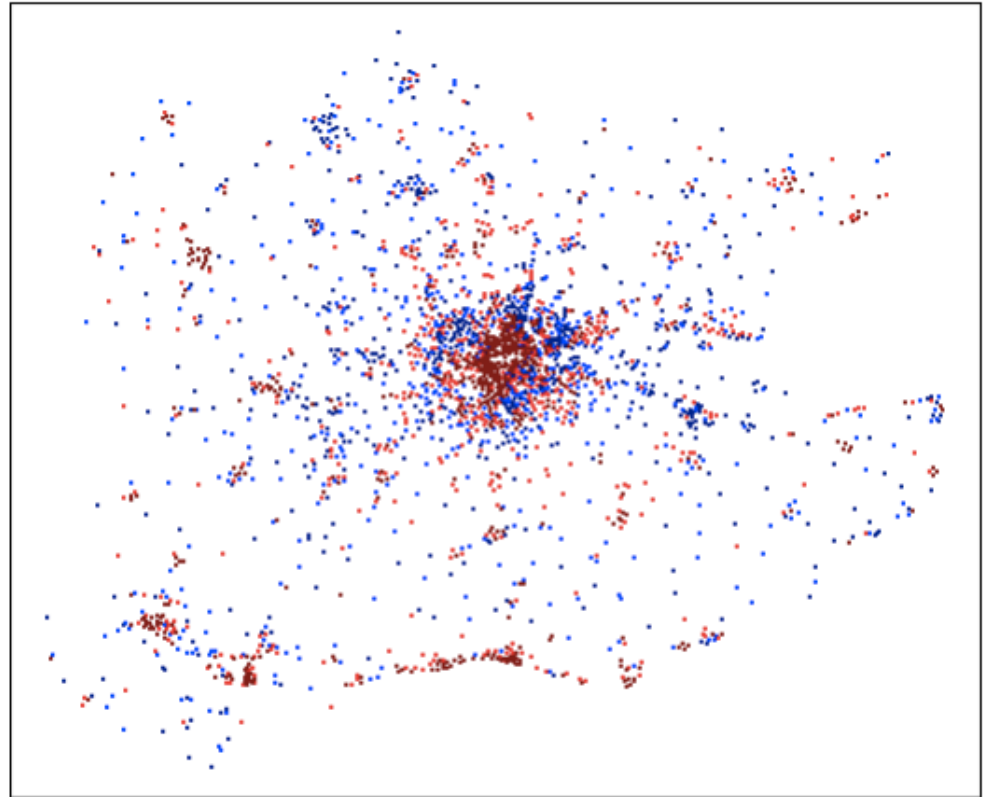# INVERSE DISTANCE WEIGHTING

OTHER METHODS TO RESEARCH/EXPLORE

- Polynomial Regression
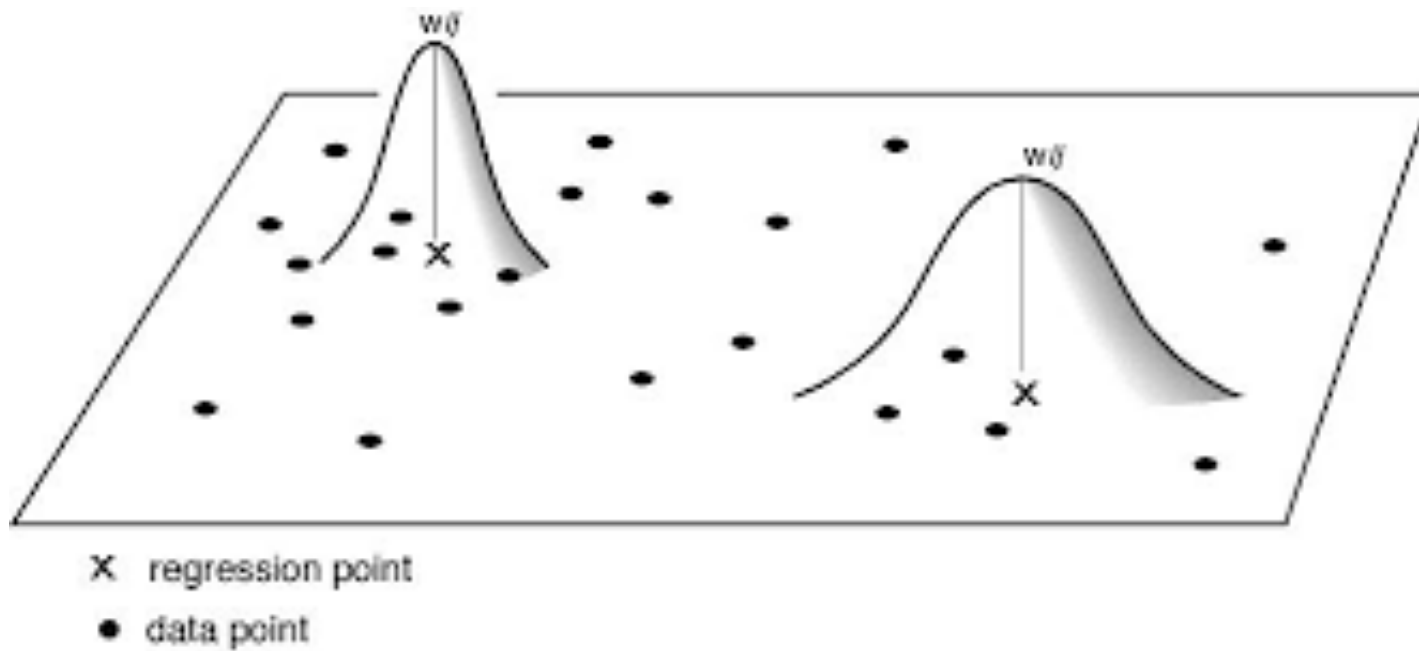- Krigging
- Spatial Lag

GWR- GEOGRAPHICALLY WEIGHTED REGRESSION

- Do relationships vary spatially?

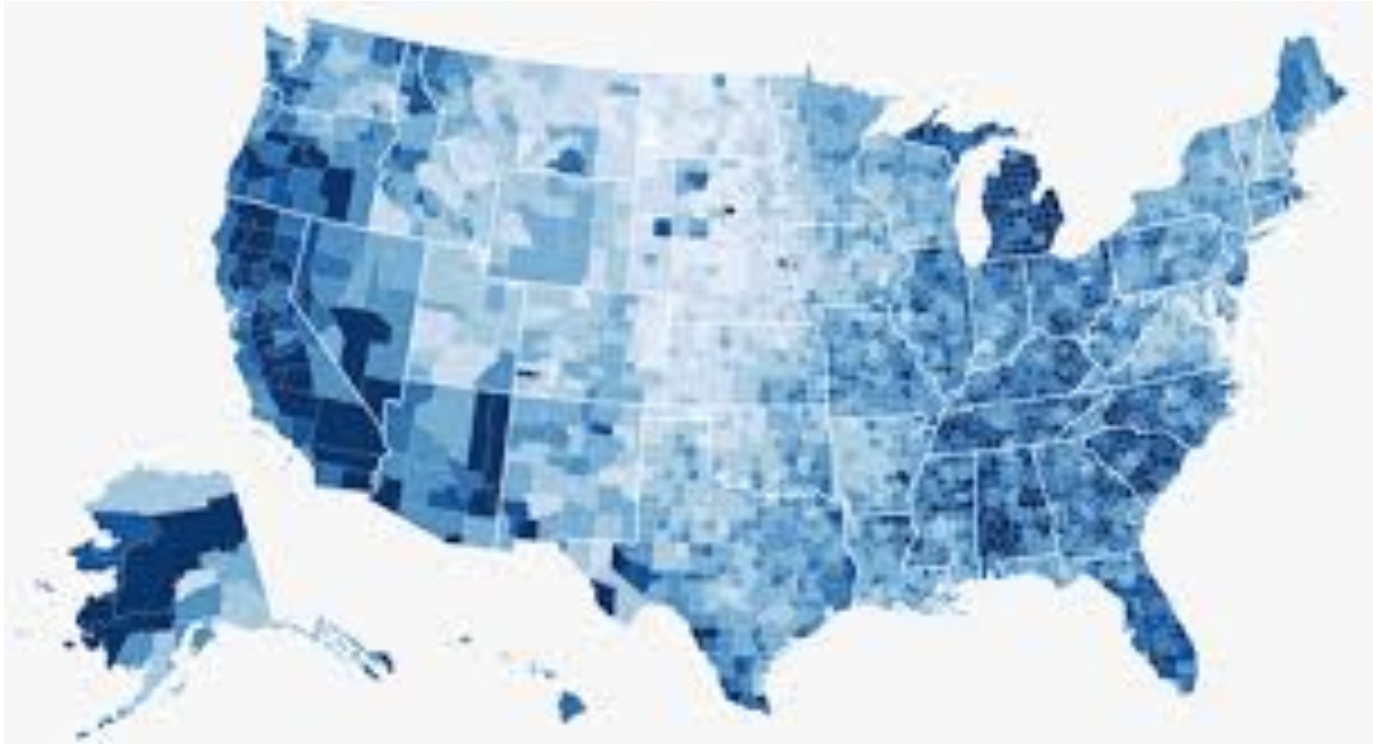- Let's take a look at a map of residuals:

GWR- GEOGRAPHICALLY WEIGHTED REGRESSION

X   regression point
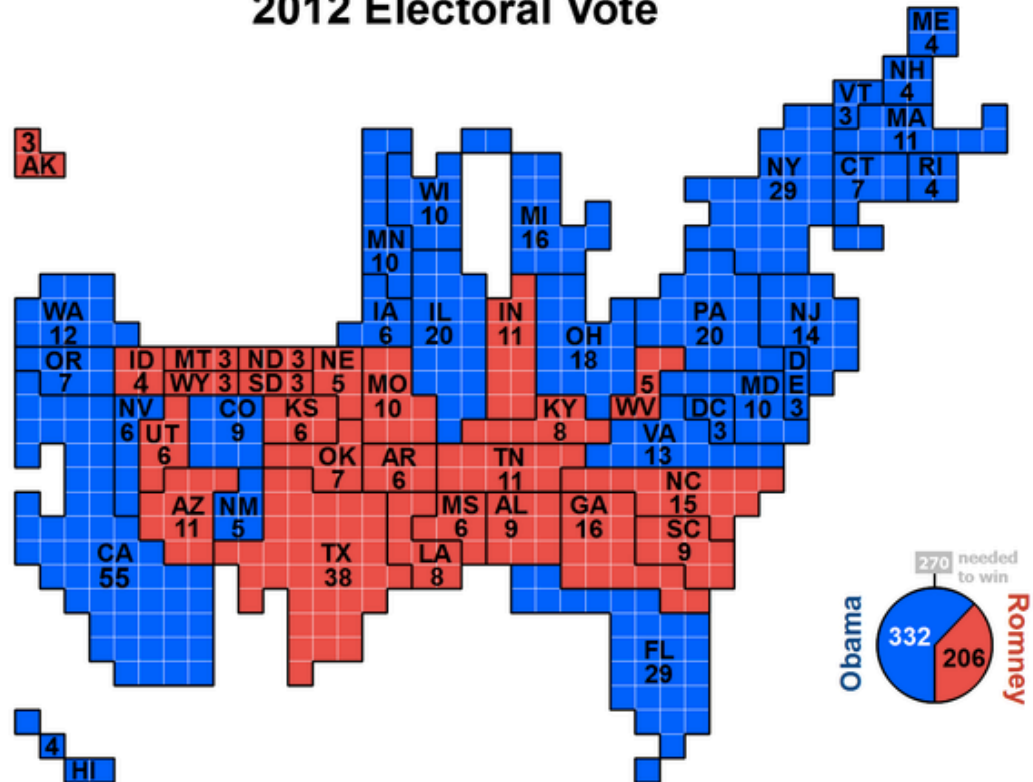•   data point

VISUALIZING GEOGRAPHIC DATA

CHOROPLETH MAPS

https://bl.ocks.org/mbostock/4060606

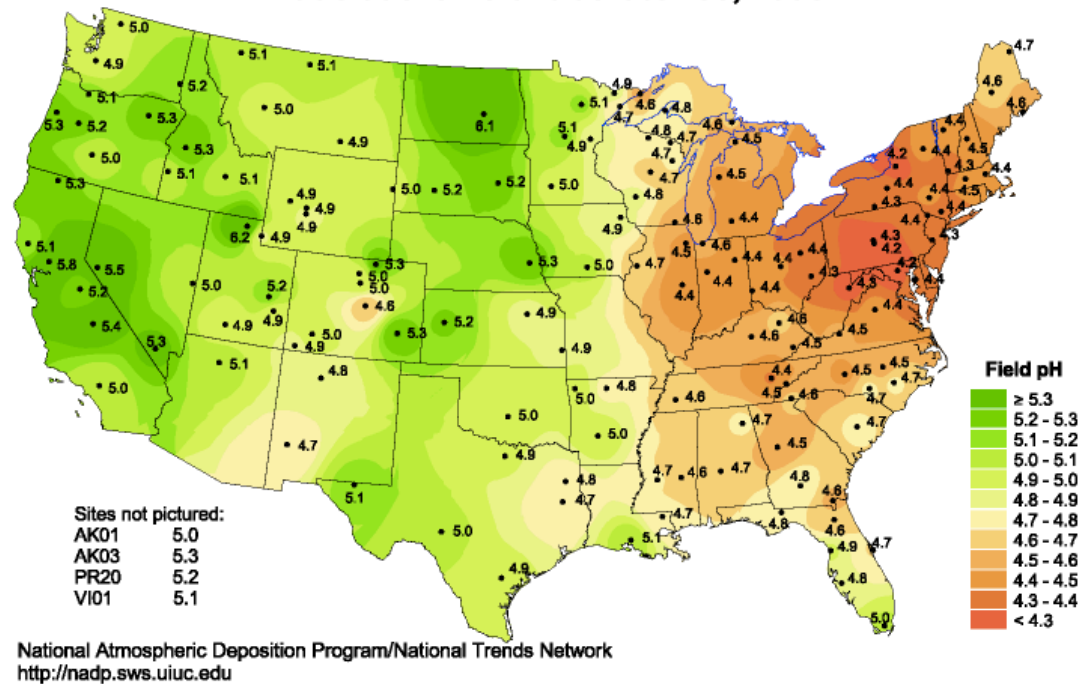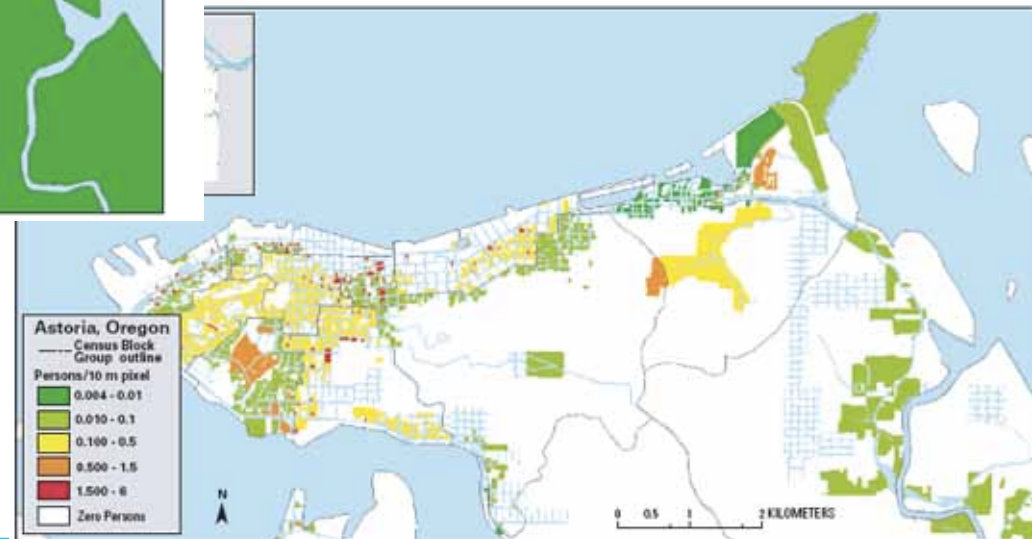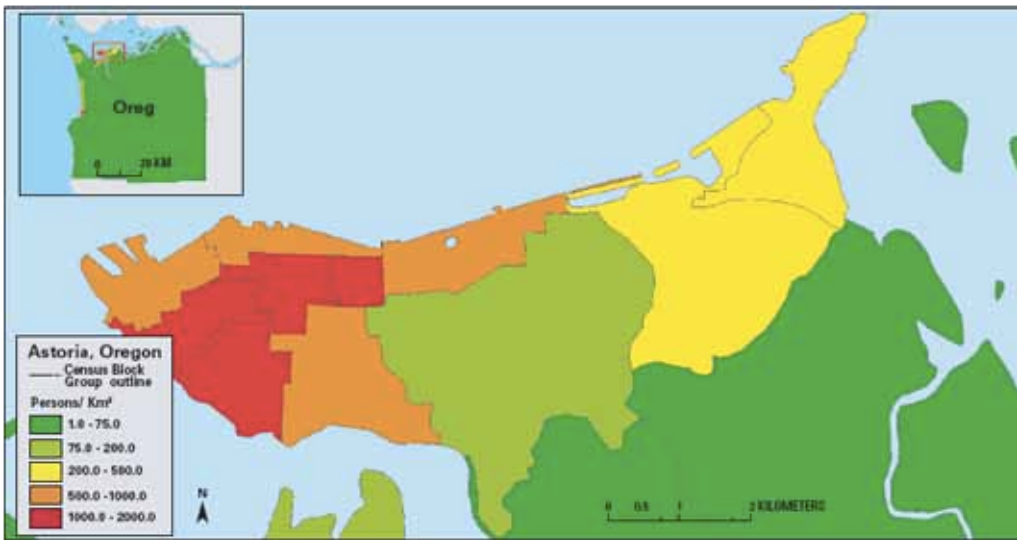# CARTOGRAM MAPS

2012 Electoral Vote

ISOPLETH MAPS

Hydrogen ion concentration as pH from measurements made at the field laboratories, 1998

National Atmospheric Deposition Program/National Trends Network
http://nadp.sws.uiuc.edu

DASYMETRIC MAPS

http://pubs.usgs.gov/tm/tm11c2/

DASYMETRIC MAPS CONTINUED…