Impact of Gerrymandering in America

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Is America Gerrymandered?

• Limited quantitative data exists that measure the extent of gerrymandering
  • We conduct a state-by-state analysis to observe the cumulative impact of gerrymandering in the United States

Gerrymandering in Individual States

• Chart key political variables in each state’s redistricting method
  • Using vote fraction plots, measure distance from Atlas compact and gerrymandered maps to currently enacted states maps
  • Graph each state’s respective distances

Methods

• Linear Regression:
  \[ \text{House Result}(p)_D = \sum_{C \in D} C_p \times \text{CountySplitValue}(p)|_{C \in D} \]

• Machine Learning: Used a 3 layer neural network to predict election results based on census data

• 538 Atlas of Redistricting:
  • Used compact maps as a neutral baseline
  • Used Democratic and Republican gerrymandered maps
  • Used state current maps

State Distance Plots

Gerrymandering at the National Level

Simulated House Election Results

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