



Gang of  
00100

## Mapping Democracy

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The Intersection of District Votes and Electoral College  
Allocations for the Presidential Elections

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# Concept & Key Question to Answer

Election results are driven by the electoral college every four years, but what if they weren't?

What if they were driven by a national popular vote, or district level votes?

## **What if election results were driven by district votes instead of the Electoral College?**

We aimed to visualize how the outcomes of our elections may have changed, should winning candidates be determined on the district vote instead of the electoral college.



# Inspiration

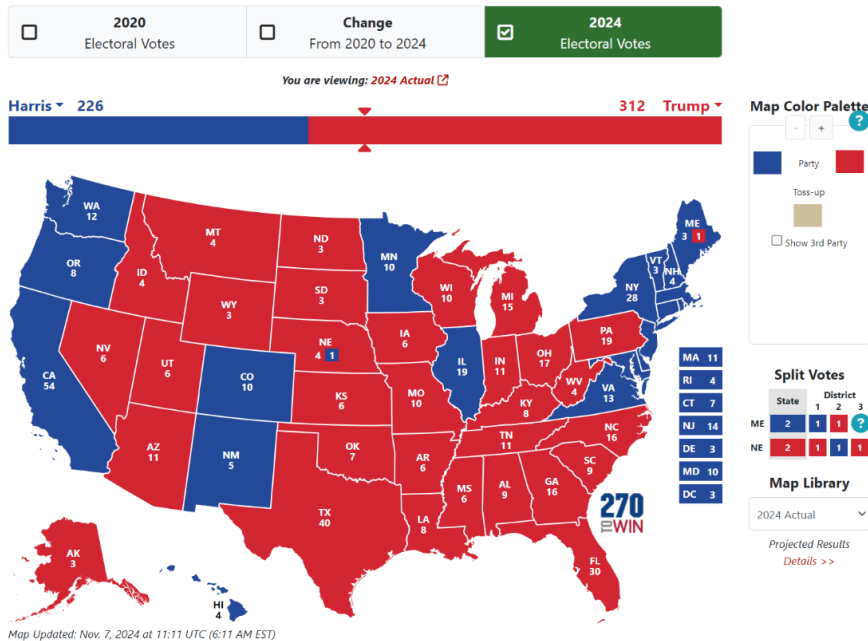
## 270 To Win

### 2024 Presidential Election Interactive Map

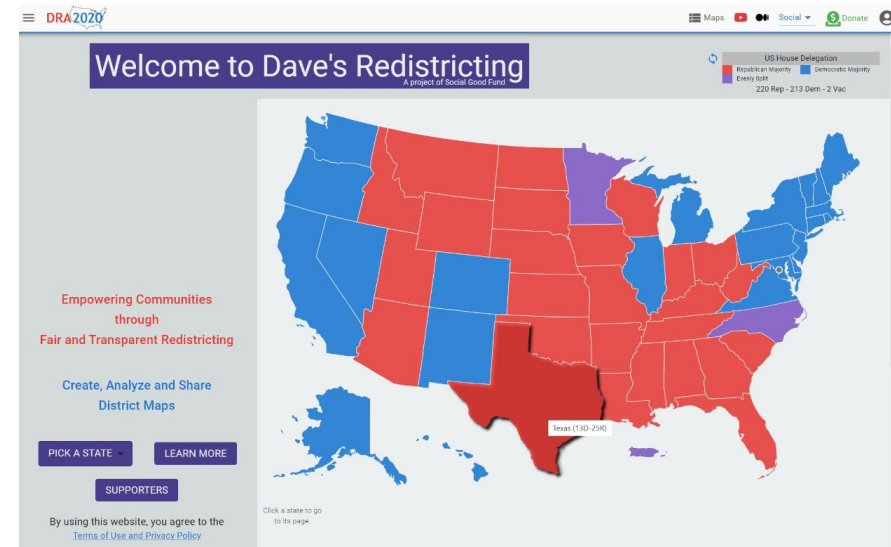
*This isn't a popularity contest™*



It will take 270 electoral votes to win the 2024 presidential election. Click states on this interactive map to create your own 2024 election forecast. **Create a specific match-up** by clicking the party and/or names near the electoral vote counter. Use the buttons below the map to share your forecast or embed it into a web page.



## DRA 2020



# Scope

## Presidential Elections 2016 and 2020

### DATABASE

Mongo DB

### LIBRARIES

- **'us'** library let us pull info about US states
- **'geopandas'** allowed us to convert from .shp to GeoJSON files
- **'rdata', 'pyreadr'** enabled us to convert R files to python
- **'geojson'** was used to edit geojson

### DATA

- Harvard Dataverse
- Census (Data & TIGER Shapefiles)

### VIEWS & INTERACTIONS

- 3 Views,  
4 User Interactions:
- Year Drop Down
  - Clickable Map
  - Data Pop Ups
  - Search for Historical View

### ETHICS

Considerations

Conversations

Decisions

# Views

1

## Election results from 1856

Historical Presidential Results

This chart displays the Presidential outcomes for each party during an election year, inclusive of the year 1860 to present day.  
The data shows the election year, state, nominee, and final vote for each winner of the county level.  
The intent of this data is to show county votes each election year, but to also provide the ability to compare these votes to the national electoral college totals to understand if county trends would ever swing an election or not without losing.

Year	FIPS	County	State	Dem Votes	Dem Nominee	Rep Votes	Rep Nominee
1860	1001	AUTAUGA	AL	851	Horatio Seymour	1005	Ulysses S. Grant
1872	1001	AUTAUGA	AL	689	Horatio Seymour	1393	Ulysses S. Grant
1876	1001	AUTAUGA	AL	804	Samuel J. Tilden	1376	Rutherford B. Hayes
1880	1001	AUTAUGA	AL	878	Winfield Scott Hancock	874	James A. Garfield
1884	1001	AUTAUGA	AL	911	Grover Cleveland	877	James G. Blaine
1888	1001	AUTAUGA	AL	883	Grover Cleveland	879	Benjamin Harrison
1892	1001	AUTAUGA	AL	926	Grover Cleveland	81	Benjamin Harrison
1896	1001	AUTAUGA	AL	1232	William Jennings Bryan	239	William McKinley
1900	1001	AUTAUGA	AL	980	William Jennings Bryan	537	William McKinley
1904	1001	AUTAUGA	AL	733	Alton B. Parker	73	Theodore Roosevelt
1908	1001	AUTAUGA	AL	655	William Jennings Bryan	97	William Howard Taft
1912	1001	AUTAUGA	AL	622	Woodrow Wilson	42	William Howard Taft
1916	1001	AUTAUGA	AL	773	Woodrow Wilson	99	Charles Evan Hughes
1920	1001	AUTAUGA	AL	818	James M. Cox	210	Warren G. Harding
1924	1001	AUTAUGA	AL	781	John W. Davis	148	Calvin Coolidge
1928	1001	AUTAUGA	AL	883	Al Smith	683	Herbert Hoover
1932	1001	AUTAUGA	AL	1322	Franklin Delano Roosevelt	138	Herbert Hoover
1936	1001	AUTAUGA	AL	1525	Franklin Delano Roosevelt	84	Af Landon
1940	1001	AUTAUGA	AL	1631	Franklin Delano Roosevelt	89	Wendell Willkie
1944	1001	AUTAUGA	AL	1242	Franklin Delano Roosevelt	117	Thomas E. Dewey
1948	1001	AUTAUGA	AL	1160	Harry S. Truman	110	Thomas E. Dewey
1952	1001	AUTAUGA	AL	1505	Adlai Stevenson II	787	Dwight D. Eisenhower
1956	1001	AUTAUGA	AL	1115	Adlai Stevenson II	887	Dwight D. Eisenhower
1960	1001	AUTAUGA	AL	1324	John F. Kennedy	1153	Richard M. Nixon
1964	1001	AUTAUGA	AL	491	Lyndon B. Johnson	2969	Barry Goldwater
1968	1001	AUTAUGA	AL	5491	Herbert H. Humphrey	587	Richard M. Nixon
1972	1001	AUTAUGA	AL	1593	George S. McGovern	5387	Richard M. Nixon
1976	1001	AUTAUGA	AL	4640	Jimmy Carter	4512	Gerald Ford
1980	1001	AUTAUGA	AL	4295	Jimmy Carter	5292	Ronald Reagan
1984	1001	AUTAUGA	AL	3368	Walter Mondale	8350	Ronald Reagan
1988	1001	AUTAUGA	AL	2847	Michael Dukakis	7928	George H. W. Bush
1992	1001	AUTAUGA	AL	4819	Bill Clinton	8715	George H. W. Bush
1996	1001	AUTAUGA	AL	5015	Bill Clinton	9509	Bob Dole
2000	1001	AUTAUGA	AL	4942	Al Gore	11993	George W. Bush
2004	1001	AUTAUGA	AL	4768	John F. Kerry	15195	George W. Bush
2008	1001	AUTAUGA	AL	6003	Barack H. Obama	17403	John McCain
2012	1001	AUTAUGA	AL	6383	Barack H. Obama	17379	Mitt Romney
2016	1001	AUTAUGA	AL	5088	Hillary Rodham Clinton	18172	Donald Trump
2020	1001	AUTAUGA	AL	7303	Joe Biden	19838	Donald Trump
1860	1003	BALDWIN	AL	673	Horatio Seymour	508	Ulysses S. Grant
1872	1003	BALDWIN	AL	549	Horatio Seymour	707	Ulysses S. Grant
1876	1003	BALDWIN	AL	788	Samuel J. Tilden	662	Rutherford B. Hayes
1880	1003	BALDWIN	AL	767	Winfield Scott Hancock	869	James A. Garfield

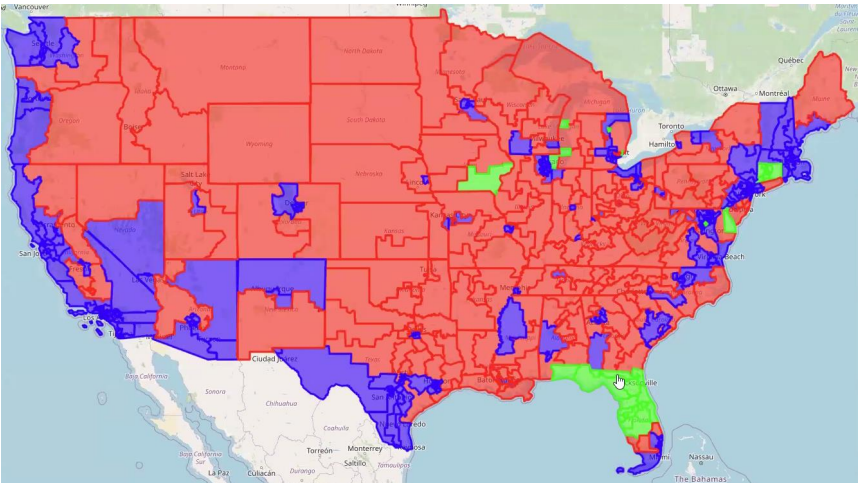
2

## Total Election Result view



3

## District View



# Data Analysis

## Findings Impacting Scope

- Narrowed scope to elections post 1952 due to the *quality and limitation of data*
- Census county boundaries were publicly provided from 2007-2023. To coincide with elections, we focused on the 2008, 2012, 2016 and 2020 data.
- Our scope of data was reduced after realizing the most complete data across Harvard and Census data would be for the years 2012, 2016, and 2020.
- Our scope of data was narrowed a 4<sup>th</sup> time, to focus only on the years 2016 and 2020, after Census county/district data for 2012 was missing:

### Select Table Vintages to Download

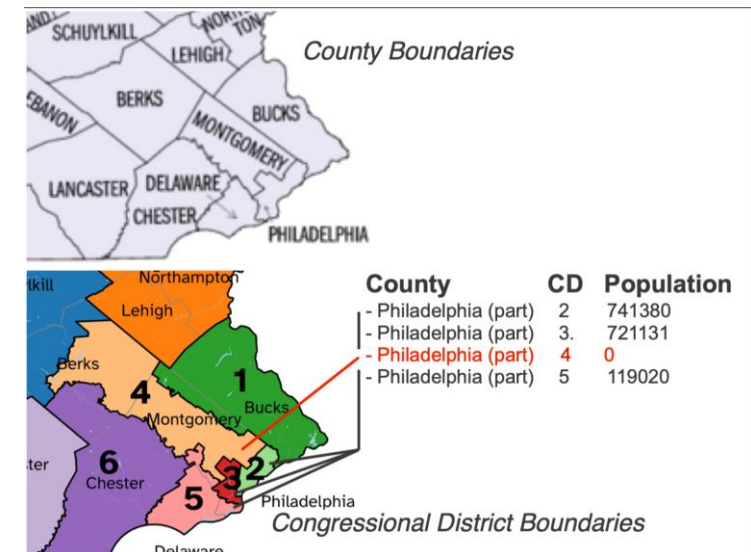
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ACS 5-Year Estimates Data Profiles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Compressed Size Estimate: 9.2 kB

DOWNLOAD .ZIP

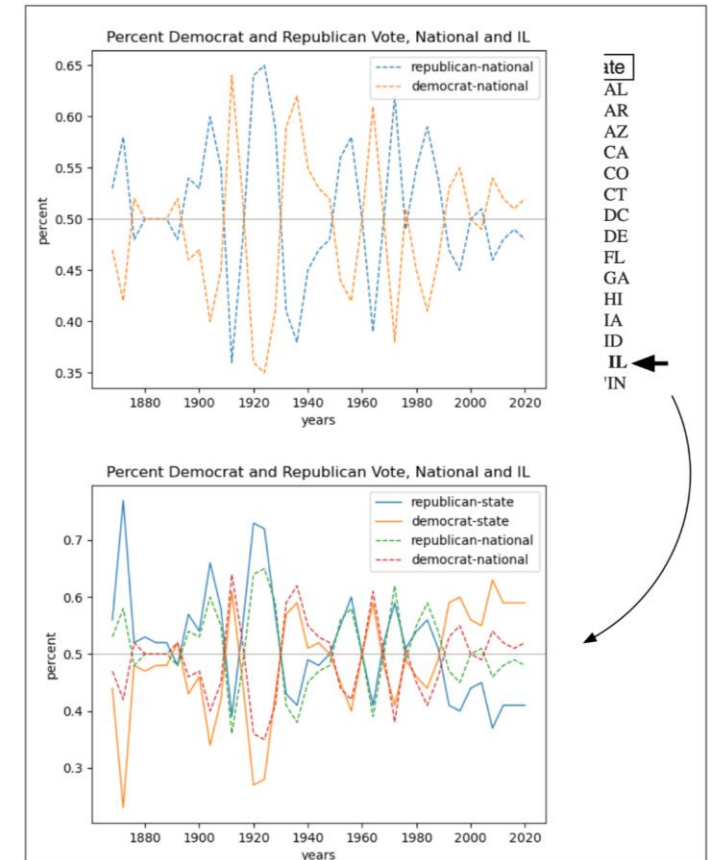
## Gap Analysis

- County Data was not clear due to null data – 43 counties didn't have a matching part.  
(see example screenshot) →
- All of PA in 2016
- Election data for Alaska was missing in the Harvard Dataverse
- A few congressional districts not defined
- State FIPS and Congressional District will serve as the key identifiers across data sets



# With more time and resources...

- Line graph of the election years that show percentage of the popular vote by party, with the ability to filter by state
  - Dynamic matplotlib graph generated from MongoDB →
- Pagination and filtering to county election data, dating back to the 1800s
- Additional years of district data and actual district voting results (at a cost).



**DEMO**



**Alternates/Backup**

# Historical Presidential Results

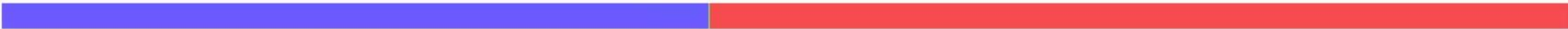
This chart displays the Presidential nominees for each party during an election year, inclusive of the year 1868 to present day.

The data shows the election year, state, nominee, and total votes for each nominee at the county level.

The intent of this data is to show county votes each election year, but to also provide the ability to compare these totals to the national electoral college totals to understand if county totals would ever swing an election in our nation's history.



Show	10	▼	entries				Search:	<input type="text"/>
Year	FIPS	County	State	Dem Votes	Dem Nominee	Rep Votes	Rep Nominee	
1868	1001	AUTAUGA	AL	851	Horatio Seymour	1505	Ulysses S. Grant	
1868	1003	BALDWIN	AL	673	Horatio Seymour	558	Ulysses S. Grant	
1868	1005	BARBOUR	AL	2210	Horatio Seymour	3168	Ulysses S. Grant	
1868	1007	BIBB	AL	744	Horatio Seymour	492	Ulysses S. Grant	
1868	1009	BLOUNT	AL	461	Horatio Seymour	275	Ulysses S. Grant	
1868	1011	BULLOCK	AL	1634	Horatio Seymour	2103	Ulysses S. Grant	▼



Democrat Votes:241 Republican Votes:294



Democrat Votes:306 Republican Votes:232

2020 Election ▾

