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4.8 Assignment 1

4.8 Assignment: Data Visualization

Using the below data we shall create some charts to look at historical trends in US Election votes:

Year	Democrat at Votes (1,000s)	Republican Votes (1,000s)	Democrat Electoral Votes	Republican Electoral Votes	Democrat Candidate	Republican Candidate
1940	27,313	22,348	449	82	F.D.Roosevelt	Willkie
1944	25,613	22,018	432	99	F.D.Roosevelt	Dewey
1948	24,106	21,969	303	189	Truman	Dewey
1952	27,315	33,779	89	442	Stevenson	Eisenhower
1956	26,023	35,590	73	457	Stevenson	Eisenhower
1960	34,227	34,108	303	219	Kennedy	Nixon
1964	42,825	27,147	486	52	Johnson	Goldwater
1968	30,989	31,710	191	301	Humphrey	Nixon
1972	28,902	46,740	17	520	McGovern	Nixon
1976	40,826	39,148	297	240	Carter	Ford
1980	35,481	43,643	49	489	Carter	Reagan
1984	37,450	54,167	13	525	Mondale	Reagan

1988	41,717	48,643	111	426	Dukakis	Bush
1992	44,858	38,799	370	168	Clinton	Bush
1996	47,402	39,198	379	159	Clinton	Dole
2000	50,996	50,465	266	271	Gore	Bush
2004	58,895	61,837	251	286	Kerry	Bush
2008	69,298	59,598	365	173	Obama	McCain
2012	65,444	60,588	332	206	Obama	Romney

- Go to <https://www.google.com/sheets/about/>
- Click on “Sheets” and then the “Blank” icon under “Start a new spreadsheet” – it is a big white square with a green plus.
- This will open a new spreadsheet in the browser.
- Copy and Paste the “USA Elections” dataset into the spreadsheet.
- This should have 6 columns headed – Year, Candidate, Party, Number(1,000), Percent, Electoral Votes.

The aim of this exercise is to compare the proportion of votes gained by Democratic versus Republican Presidential candidates from 1940-2014.

Firstly, make a time-series line chart.

- Highlight cells A1-C20
- Click “Insert -> Chart” from the drop-down menu. This will open the “Chart Editor” tool.
- Click “Insert”

This should give you a line chart with two lines.

It still needs some adjustments though:

- Change the title by double clicking on it to read: “Total Popular Vote (in 1000s)”
- Change the intervals between years on the x-axis by double clicking the existing numbers and changing the “Min” and “Max” values to ‘1940’ and ‘2020’

This chart can be further modified by clicking the dropdown arrow in the top right of the chart canvas and clicking “Advanced Edit”. In particular the “Customization” tab gives many options for adding points, changing colors and line thickness, modifying gridlines and so on.

After completing the exercise above, answer the questions that follow.

Multiple Choice

0.0/1.0 point (graded)

The popular vote overall is

☐ increasing

☐ decreasing

☐ the same over time

Submit

You have used 0 of 1 attempt

Multiple Choice

0.0/1.0 point (graded)

Republicans have had the largest vote share _____ times since 1988

☐ zero

☐ one

☐ two

Submit

You have used 0 of 1 attempt

Multiple Choice

0.0/1.0 point (graded)

What are some drawbacks of this line chart?

- ☐ It is not easy to see individual elections.
- ☐ No other information is given e.g. who won the election.
- ☐ Connecting points is slightly disingenuous as elections are not held every year.
- ☐ All of the above.

Submit

You have used 0 of 1 attempt