Creating a Story Map

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1. The objective of the project

My main goal for this project was to present the viewers with a detailed information about US 2020 elections and compare them to the previous one. I decided to use this topic because I think in the future, we can use this type of data visualization in Armenia, to show our public the differences of election outcomes. Actually, in the beginning I tried to do exactly that, however, I could not find any legitimate data on our elections that I could use to create layers in QGIS.

2. Data Acquisition and Methodology

2.1 This project requited quite a lot of data. Firstly, I had to find a source that had data about 2016 elections, and then I had to create a similar dataset for the 2020 elections myself. The reason behind it was that the election happened not long ago, and there are no layers or any CSV files with the latest information. The most challenging part for me was creating those CSV files, because it took a lot of time.

2.2 The first thing that I did was in QGIS, I used my CSV files and a base layer of US states and used join feature to give the attribute table of the CSV file to the state layer. Then, in ArcGIS I used many different styles to represent the data. Also, I used the analysis tool hot spots and came to the conclusion that most of the multiracial states are democratic, after that I used an expression to get rid of the states that were won by republicans, and represented it on the last map, to make it more visible for people. The most interesting thing for me was using the expressions to add data to the attribute tables. I used my basic programing knowledge to create simple, yet useful expressions. For example, I used the condition if and a function that return the absolute value of a number.

3. Data Visualization with ArcGIS Online Story Map

https://storymaps.arcgis.com/stories/f7a6cbb9c4ba4b57a278ef9a47f80044

Assignment # 2: Creating a Story Map

Here are some of the files that I have created myself using data from the internet.

State	Republican votes in 2020	Democrat votes 2020	Republican votes in 2016	Democrat votes 2016	Republican 2016 / Democrats 2016	Republican 2020 / Democrats 2020
Iowa	897467	758881	800,983	653,669	1.22536482531679	1.18261888227535
New Hampshire	365660	424937	345,790	348,526	0.992149796571848	0.860504027655864
Nevada	669890	703486	512,058	539,260	0.949556800059341	0.952243541449297
South Carolina	1385103	1091541	1,155,389	855,373	1.35074289228208	1.26894271493238
Alabama	1434159	843473	1,318,555	729,547	1.80736128035617	1.7003022029158
Arkansas	759333	423086	684,872	380,494	1.79995479560782	1.79474858539399
California	5810670	10844195	4,483,810	8,753,788	0.512213683950308	0.535832304749223
Colorado	1364202	1803921	1,202,484	1,338,870	0.898133500638598	0.756242651424314
Maine	341949	420357	335,593	357,735	0.938105021873733	0.813472833805551
Massachusetts	1137083	2283225	1,090,893	1,995,196	0.546759817080628	0.49801618324957
Minnesota	1483750	1716312	1,323,232	1,367,825	0.967398607277978	0.864498995520628
North Carolina	2758126	2684031	2,362,631	2,189,316	1.07916399459923	1.02760586595311
Oklahoma	1020280	503890	949,136	420,375	2.25783169788879	2.02480700152811
Tennessee	1849820	1139376	1,522,925	870,695	1.74909124320227	1.623537796127
Texas	5873085	5235216	4,685,047	3,877,868	1.20815020005838	1.1218419641138
Utah	852677	555694	515,231	310,676	1.65841906037158	1.53443621849435
Vermont	112704	242820	95,369	178,573	0.534061700257038	0.464146281195948
Virginia	1962703	2413328	1,769,443	1,981,473	0.892993747580714	0.813276521053085
Idaho	554128	287031	409,055	189,765	2.15558717360946	1.93055105546091
Michigan	2648577	2795988	2,279,543	2,268,839	1.00471783145477	0.947277670719617
Mississippi	739309	502886	700,714	485,131	1.44438100224475	1.47013239581138
Missouri	1711848	1242851	1,594,511	1,071,068	1.48871126763193	1.37735577313773
Washington	1574498	2359319	1,221,747	1,742,718	0.701058346789326	0.667352740345837
Wyoming	193559	73491	174,419	55,973	3.11612741857681	2.63377828577649
Arizona	1661686	1672143	1,252,401	1,161,167	1.07857095491002	0.993746348248924
Florida	5668640	5296972	4,617,886	4,504,975	1.02506362410446	1.0701661250994
Illinois	2418695	3403152	2,146,015	3,090,729	0.694339426070678	0.710722001250605
Ohio	3074400	2603677	2,841,005	2,394,164	1.18663759040734	1.18079162661113
Georgia	2458025	2472230	2,089,104	1,877,963	1.11243086258888	0.994254175380122
North Dakota	235595	114902	216,794	93,758	2.31227201945434	2.05039947085342
Alaska	185769	150262	163,387	116,454	1.40301750047229	1.2363005949608
Hawaii	196800	366070	128,847	266,891	0.482770119636856	0.537602097959407
Louisiana	1255776	856034	1,178,638	780,154	1.51077607754366	1.46696976989232
Wisconsin	1610145	1630713	1,405,284	1,382,536	1.01645382109399	0.987387112263163
Connecticut	714973	1080387	673,215	897,572	0.750040108203019	0.661774901030834
Delaware	200603	296268	185,127	235,603	0.785758245862744	0.677099788029757
Maryland	960681	1917406	943,169	1,677,928	0.562103379882808	0.501031602070714
New York	2882237	3790455	2,819,534	4,556,124	0.618844877795249	0.760393409234511
Pennsylvania	3359923	3433048	2,970,733	2,926,441	1.01513510779818	0.978699686109836
Rhode Island	199830	306192	180,543	252,525	0.714950994950995	0.652629722527042
Kansas	753370	551199	671,018	427,005	1.57145232491423	1.36678404714087
Indiana	1729394	1241734	1,557,286	1,033,126	1.50735341091019	1.39272501195908
Nebraska	555509	374169	495,961	284,494	1.74330917347993	1.48464731177623
West Virginia	544826	235657	489,371	188,794	2.59208979098912	2.31194490297339
Kentucky	1326347	772223	1,202,971	628,854	1.91295753863377	1.71756992474972
Oregon	952449	1333473	782,403	1,002,106	0.780758722131192	0.714261931062721
District of Columbia	18172	307265	12,723	282,830	0.0449846197362373	0.0591411322474086
Montana	343590	244783	279,240	177,709	1.57133290941933	1.40365139736011
New Jersey	1815096	2506841	1,601,933	2,148,278	0.745682355821733	0.724057090178436
New Mexico	401814	501459	319,667	385,234	0.829799550403132	0.8012898362578
South Dakota	261043	150471	227,721	117,458	1.93874406170716	1.73483927135461

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State	Democrat votes	Republican votes	Total count
Iowa	653,669	800,983	1,454,652
New Hampshire	348,526	345,790	694,316
Nevada	539,260	512,058	1,051,318
South Carolina	855,373	1,155,389	2,010,762
Alabama	729,547	1,318,555	2,048,102
Arkansas	380,494	684,872	1,065,366
California	8,753,788	4,483,810	13,237,598
Colorado	1,338,870	1,202,484	2,541,354
Maine	357,735	335,593	693,328
Massachusetts	1,995,196	1,090,893	3,086,089
Minnesota	1,367,825	1,323,232	2,691,057
North Carolina	2,189,316	2,362,631	4,551,947
Oklahoma	420,375	949,136	1,369,511
Tennessee	870,695	1,522,925	2,393,620
Texas	3,877,868	4,685,047	8,562,915
Utah	310,676	515,231	825,907
Vermont	178,573	95,369	273,942
Virginia	1,981,473	1,769,443	3,750,916
Idaho	189,765	409,055	598,820
Michigan	2,268,839	2,279,543	4,548,382
Mississippi	485,131	700,714	1,185,845
Missouri	1,071,068	1,594,511	2,665,579
Washington	1,742,718	1,221,747	2,964,465
Wyoming	55,973	174,419	230,392
Arizona	1,161,167	1,252,401	2,413,568
Florida	4,504,975	4,617,886	9,122,861
Illinois	3,090,729	2,146,015	5,236,744
Ohio	2,394,164	2,841,005	5,235,169
Georgia	1,877,963	2,089,104	3,967,067
North Dakota	93,758	216,794	310,552
Alaska	116,454	163,387	279,841
Hawaii	266,891	128,847	395,738
Louisiana	780,154	1,178,638	1,958,792
Wisconsin	1,382,536	1,405,284	2,787,820
Connecticut	897,572	673,215	1,570,787
Delaware	235,603	185,127	420,730
Maryland	1,677,928	943,169	2,621,097
New York	4,556,124	2,819,534	7,375,658
Pennsylvania	2,926,441	2,970,733	5,897,174
Rhode Island	252,525	180,543	433,068
Kansas	427,005	671,018	1,098,023
Indiana	1,033,126	1,557,286	2,590,412
Nebraska	284,494	495,961	780,455
West Virginia	188,794	489,371	678,165
Kentucky	628,854	1,202,971	1,831,825
Oregon	1,002,106	782,403	1,784,509
District of Columbia	282,830	12,723	295,553
Montana	177,709	279,240	456,949
New Jersey	2,148,278	1,601,933	3,750,211
New Mexico	385,234	319,667	704,901
South Dakota	117,458	227,721	345,179