

View

File (voter-turn...r-key).arr

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ntials2021

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3
4 include shared-gdrive("Bootstrap-DataScience-v1.5.arr",
5 "1btFfKccas4zkQ6-SYCYMkcDCqmduzQqB")
6 include gdrive-sheets
7 include tables
8 include image
9
10 voter-data-2020 = load-
11 spreadsheet("1kSAXNDRTuQidwFuTGvQRMc7HtsIkcZGqG8q_r4iZR0")
12 voter-table = load-table: state, total-pop, total-citizen, total-
13 register, total-voted, white-pop, white-register, white-voted,
14 black-pop, black-register, black-voted, hispanic-pop, hispanic-
15 register, hispanic-voted, asian-pop, asian-register, asian-voted
16
17 source: voter-data-2020.sheet-by-name("Sheet1", true) end
18
19 #Note: This dataset contains information about the total US
20 population which can be used for comparison.
21
22 #Part I: In this part of the project, you will practice writing
23 functions and applying table methods using the voter-table.
24
25 #####
26 # Practice 1: Look at the spreadsheet "voter-data-2020." Choose
27 three states and define the rows below.
28
29 #State #1:
30
31 alabama = voter-table.row-n(1)
32
33 #State #2:
34
35 new-york = voter-table.row-n(33)
36
37 #State #3:
38
39 delaware = voter-table.row-n(8)
40
41 #####
42 # Practice 2: Define a table called "population-sort" that sorts the
43 table by total population starting with the greatest population.
44
45 population-sort = voter-table.order-by("total-pop", false)
46
47 #####
48 # Practice 3a: Write a function called "states-only" that consumes a
49 row and returns true if the population of the state is less than
50 250,000.
51
52 fun states-only(row): row["total-pop"] < 250000 end
53
54 # Practice 3b: Define a table called "states" that only shows the
55 states. Note: This table will be used for many of your graphs.
56
57 states = voter-table.filter(states-only)
58
59

```



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```
50 states = voter-table.filter(states-only)
51
52
53
54 #####
55 # Practice 4a: Write a function called "percent-voted" that
56 # calculates the percent of total voters out of the total population.
57 # Round your percent by adding the code num-round().
58
59 # Define the function.
60 fun percent-voted(row): num-round((row["total-voted"] / row["total-
61   pop"] * 100) end
62
63 # Practice 3b: Define a table adds a column with the percent of
64 # total voters to the total population.
65
66 total-percent-voted = voter-table.build-column("Total-PCT-Voted",
67   percent-voted)
68
69 #####
70 # Practice 5: Define a small random sample with 15 states and medium
71 # random sample with 25 states.
72
73 small-sample = random-rows(voter-table, 15)
74 medium-sample = random-rows(voter-table, 25)
75
76 #####
77 # Practice 6: Create a scatter plot showing the total registered
78 # population to the total voters for only the states.
79
80 # scatter-plot(states, "state", "total-register", "total-voted")
81
82 #####
83 # Part II: In this part, you will analyze the data from the table to
84 # see if there are differences between voter turnout rates of people
85 # of different races in different states. You should look at different
86 # groups of states individually, smaller samples of states or all of
87 # the states.
88
89 # Write your code in the definitions area. You can save different
90 # tables or comment out the code when not required. Refer to the
91 # google slides for specific directions.
```