02-Choropleth Maps Exercise

April 26, 2019

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1 Choropleth Maps Exercise

Welcome to the Choropleth Maps Exercise! In this exercise we will give you some simple datasets and ask you to create Choropleth Maps from them. Due to the Nature of Plotly we can't show you examples

[Full Documentation Reference](#)

1.1 Plotly Imports

```
In [38]: import plotly.graph_objs as go
         from plotly.offline import init_notebook_mode,iplot
         init_notebook_mode(connected=True)
```

** Import pandas and read the csv file: 2014_World_Power_Consumption**
** Check the head of the DataFrame. **

```
In [156]:
```

```
Out[156]:        Country  Power Consumption KWH                         Text
         0         China           5.523000e+12     China 5,523,000,000,000
         1  United States           3.832000e+12    United 3,832,000,000,000
         2      European           2.771000e+12  European 2,771,000,000,000
         3        Russia           1.065000e+12    Russia 1,065,000,000,000
         4         Japan           9.210000e+11      Japan 921,000,000,000
```

** Referencing the lecture notes, create a Choropleth Plot of the Power Consumption for Countries using the data and layout dictionary. **

```
In [ ]: choromap = go.Figure(data = [data],layout = layout)
        iplot(choromap,validate=False)
```

1.2 USA Choropleth

** Import the 2012_Election_Data csv file using pandas. **
    ** Check the head of the DataFrame. **

```
In [110]:
```

```
Out[110]:    Year  ICPSR State Code  Alphanumeric State Code      State  \
          0  2012                41                        1    Alabama
          1  2012                81                        2     Alaska
          2  2012                61                        3    Arizona
          3  2012                42                        4   Arkansas
          4  2012                71                        5 California

             VEP Total Ballots Counted VEP Highest Office VAP Highest Office  \
          0                        NaN              58.6%              56.0%
          1                      58.9%              58.7%              55.3%
          2                      53.0%              52.6%              46.5%
          3                      51.1%              50.7%              47.7%
          4                      55.7%              55.1%              45.1%

             Total Ballots Counted Highest Office Voting-Eligible Population (VEP)  \
          0                    NaN      2,074,338                        3,539,217
          1                301,694        300,495                          511,792
          2              2,323,579      2,306,559                        4,387,900
          3              1,078,548      1,069,468                        2,109,847
          4             13,202,158     13,038,547                       23,681,837

             Voting-Age Population (VAP) % Non-citizen   Prison Probation   Parole  \
          0                   3707440.0          2.6%   32,232   57,993    8,616
          1                    543763.0          3.8%    5,633    7,173    1,882
          2                   4959270.0          9.9%   35,188   72,452    7,460
          3                   2242740.0          3.5%   14,471   30,122   23,372
          4                  28913129.0         17.4%  119,455        0   89,287

             Total Ineligible Felon State Abv
          0                   71,584        AL
          1                   11,317        AK
          2                   81,048        AZ
          3                   53,808        AR
          4                  208,742        CA
```

** Now create a plot that displays the Voting-Age Population (VAP) per state. If you later want to play around with other columns, make sure you consider their data type. VAP has already been transformed to a float for you. **

```
In [ ]: choromap = go.Figure(data = [data],layout = layout)
        iplot(choromap,validate=False)
```

2 Great Job!