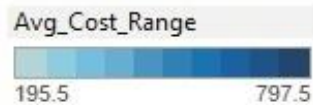Heatmap generation having average cost of "Cardio vascular stress test" in different states of US

State with highest avg cost is: Wyoming

Avg_Cost_Range

195.5   797.5

State with lowest avg cost is: Colorado

Heat map generation using Tableau

The above heat map is generated using Tableau. Tableau is considered to be a best geocoding tool for heat map generation.

To generate a heatmap, mapping program needs to know

1. State code to describe the locations and Average cost column.
2. Plot the statecode onto the map.
3. Add data to associated locations on the map.

The step 2 is called Geo coding, which is to transform state code of the various locations into locations onto the map. Here I have changed the latitude and longitude details of every state according to the details given in the states.xml file.

Undergrad output:

Records	Practitioner	Cost
226	Cardiology	288.06426549442483
2	Cardiac Surgery	274.5
5	Family Practice	246.64347826
19	Internal Medicine	320.0619958621053
1	Physician Assistant	325.0
1	Critical Care (Intensivists)	237.0

Graduate Output:

Statecode Cost

AK   595.6

AL   218.20186281367273

AR   279.70504939590666

AZ   210.44300417447485

CA   288.94893012201453

CO   195.5273186639737

CT   318.3605982559065

DC   363.61186818651163

DE   303.66974652883727

FL   240.85417881111127

GA   301.99544022743373

HI   253.74722681709676

IA   296.00291230673474

ID   292.13042748933333

IL   368.0148228545994

IN   378.27843821455957

KS   350.7362332022667

KY   276.41452937607846

LA   312.0823927613954

MA	326.56632913986897
MD	292.00616051931723
ME	259.6237420178571
MI	221.53074697990797
MN	448.7254874039474
MO	313.82837570082677
MS	333.2510005469115
MT	230.20181818199998
NC	335.2331251293194
ND	322.915
NE	215.3017080266667
NH	305.03833333333336
NJ	338.1517573909244
NM	274.95413456758064
NV	313.3669511731852
NY	307.5386555455736
OH	297.2033183178672
OK	245.75463789492588
OR	243.87944454383563
PA	331.82196261745145
PR	111.67804628366667

RI   307.4808117811539

SC   285.9603767695547

SD   226.85892773966665

TN   261.3605194424502

TX   306.2716738720551

UT   212.7306912442857

VA   289.47999730086616

VI   334.6683238425

VT   294.044

WA   276.0163670035748

WI   760.058729473252

WV   343.0405857514474

WY   797.5428458499999

Note: I have excluded VI(Virginia Islands) and PR(Puerto Rico) in heatmap as they are union territories of US and it was not mentioned in states.xml file