

Visualization Application

Shin Gao (tg2618)

Data source: <https://data.world/shinnknight/software-engineer-career-condition/workspace/file?filename=citi.xlsx>

This is an interactive platform to help the junior professionals better understand the life condition in different cities in America.

In the Alpha version, the service is only for the software engineer, since it seems to be one of the most popular positions currently.

After log into the platform, you can see the interface as below.

Job Conditions for SE (5500)

Position: Software Engineer

State: ☐

Total employment: ☐

Employment density(per 1000): ☐

Annual Salary: ☐

Hourly Salary: ☐

Living Wage:(1 Adult per hour) ☐

Tax Rate:(%) ☐

Rent Rate:(%) ☐

Criminal Rate:(per 1000) ☐

Education: ☐

Entertainment: ☐

Datatable Map

Show 10 entries

Search:

	STATE	City	Total Employment	Jobs (per 1000)	Hourly salary	Annual salary	Rental Index	Living wage(1 adult)	Edu
1	AL	Birmingham	1450	2.864	39.52	82200	19.72	10.33	
2	AL	Huntsville	2790	12.803	49.66	103290	27.45	10.13	
3	AL	Mobile	310	1.783	36.95	76850	24.63	10.84	
4	AL	Montgomery	310	1.883	42.6	88610	31.56	10.87	
5	AR	Fayetteville	1280	5.471	43.89	91290	26.34	9.57	
6	AR	Fort Smith	100	0.891	31.14	64770	17.89	9.54	
7	AR	Little Rock	620	1.824	39.01	81140	24.83	9.87	
8	AZ	Flagstaff	120	1.883	40.1	83420	32.1	11.24	
9	AZ	Lake Havasu City	40	0.81	42.79	89010	22.99	9.72	
10	AZ	Phoenix	12190	6.297	45.43	94490	33.32	10.4	

Showing 1 to 10 of 298 entries

Previous 1 2 3 4 5 ... 30 Next

Analysis:

This is a general table and list all the optional cities in America which offer Software engineer positions online.

On the left side, the user could choose other job positions and choose the conditions they care about. For example, if you want to limit the annual salary to filter the output. Just tick the “Annual Salary” box, and set the range, also you could set the weight on that condition then the result will be updated to fit your setting.

Also, there is an underlying algorithm here, after you choose any conditions, the backend will score each city based on the setting and rank the cities. The table shown here is an ordered list of the fit cities.

Position:

Software Engineer ▼

Weight

☐ State:

☐ Total employment:

☐ Employment density(per 1000):

☒ Annual Salary:

065,000145,000

030,00060,00090,000120,000150,000

☐ Hourly Salary:

DatatableMap

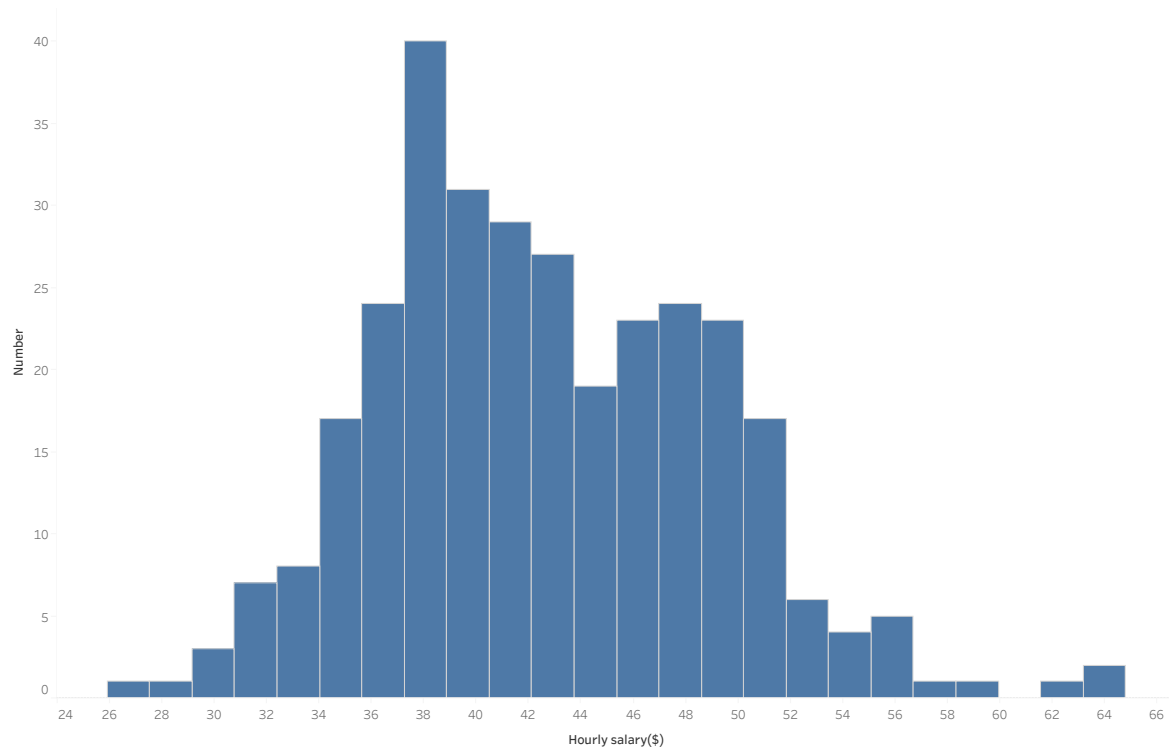
Show10 entries

	STATE	City	Total Employment	Jobs (per 1000)
1	AL	Birmingham	1450	2.864
2	AL	Huntsville	2790	12.803
3	AL	Mobile	310	1.783
4	AL	Montgomery	310	1.883
5	AR	Fayetteville	1280	5.471
6	AR	Little Rock	620	1.824
7	AZ	Flagstaff	120	1.883

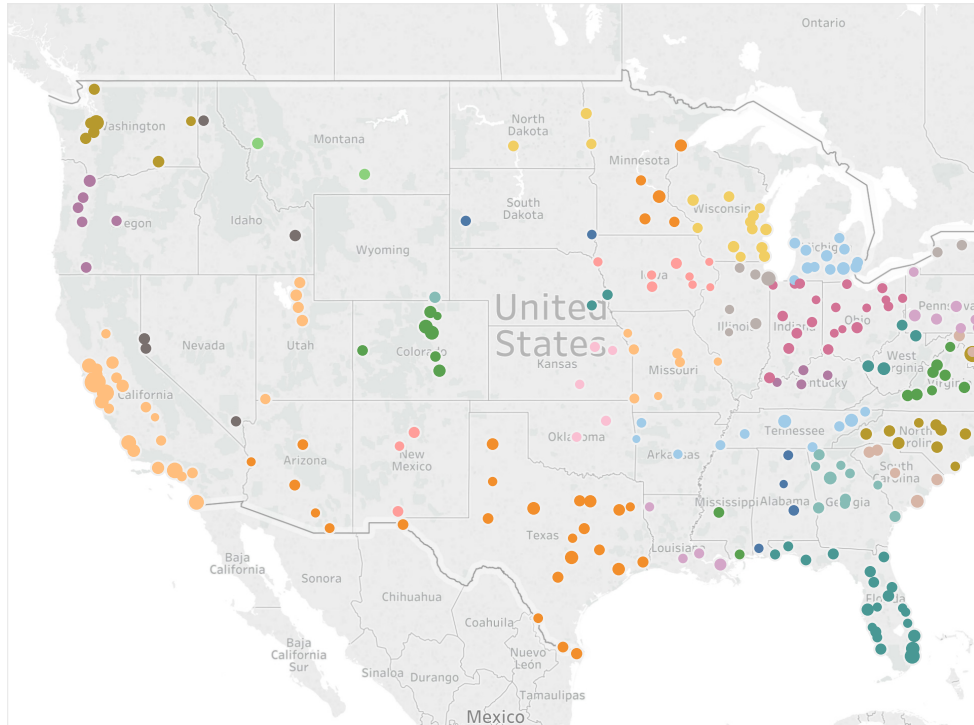
On the next tab, you could visualize the output data table, in many ways.

For example, the user could plot out the distribution of hourly salary. So he or she could have a rational expectation of his or her future hourly salary.

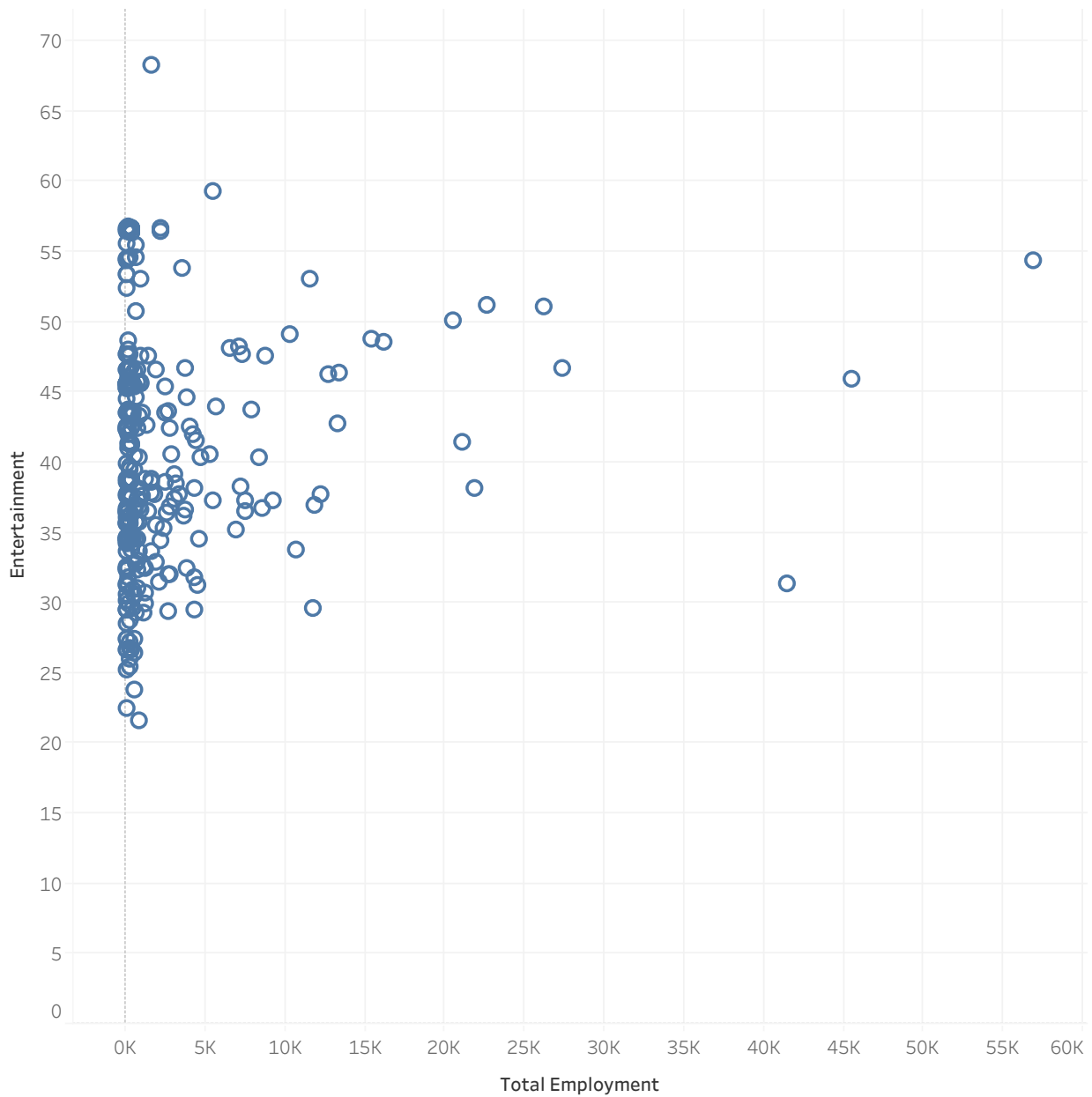
Hourly Salary Distribution



The user can also show the data on the map, for example, they can see how rental fee is like in different state.



The user can also display the relationship between different variables. For example, the relationship between Entertainment ~ total Employment.



Storyboard:

The first page (data table)

-> switch tab (show data visualization chart).

-> switch tab (show map noting the chosen cities)