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CITY-FYNDERS



WHICH CITY WOULD YOU LIKE TO LIVE IN?



100 Best Places to Live in the USA

U.S. News analyzed the 100 most populous metro areas to find the best places to live. To make the top of the list, a place had to have good value, be a desirable place to live, have a strong job market and a high quality of life.

Read the Best Places to Live methodology

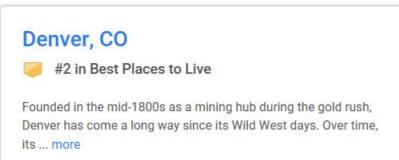
Population Size X-Large 2.5M+ (21) Large 1M - 2.5M (31) Medium 500K - 1M (46) Small 50K - 500K (27) Average Rent <\$500 - \$1,700+ Median Home Price <\$20,000 - \$830,000+

Commute Time











BACKGROUND

NOW, LET'S DIY!!

4 TYPES OF SELECTED CRITERIA

- Environment
- Human Related
- Economy
- Entertainment



- 1. ENVIRONMENT
- 2. HUMAN RELATED
- 3. ECONOMY
- 4. ENTERTAINMENT







kaggle.com



DATA USED





4 CATEGORIES

- ► Environment
- Human related
- Economy
- Entertainment

	Environment	Human	Economy	Entertainment
Seasonal avg. temperature	x			
Annual avg. precipitation	х			
Snowfall avg.	x			
Air and water quality	х			
Crime rate		Х		
Avg. household income			x	
Unemployed rate			x	
Living cost				X
City-owned parks				X
Bar count				x
Restaurant count				X
museums count				x

DATA LIMITATION

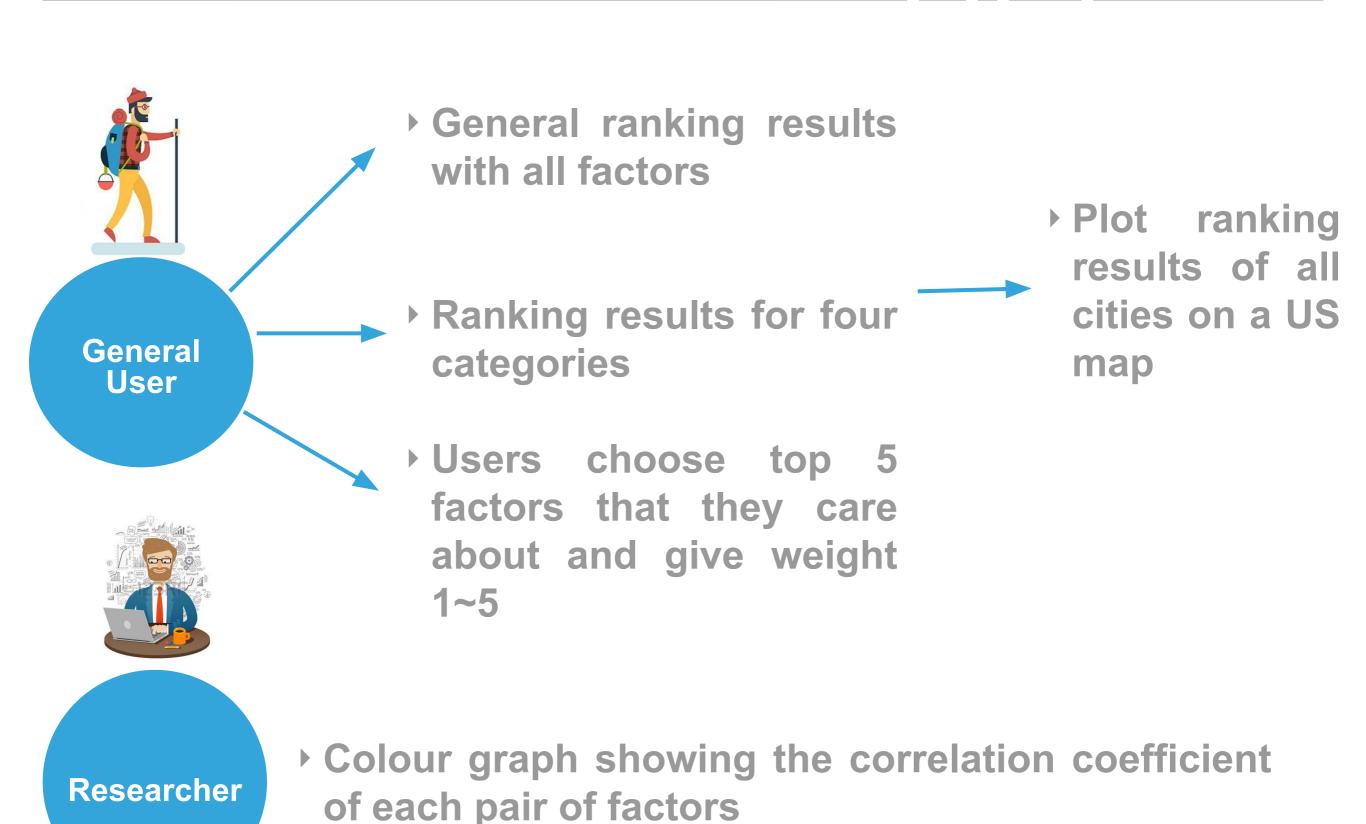
esidents	NumTop200Restau	Bar_Rank	Restaurant_Rank	Museums_Rank	Libraries_Rank	Park_Rank	TopRes_Rank
2	3.0	21.0	21.0	10.0	14.0	28.0	6.0
	2.0	15.0	12.0	19.0	19.5	4.0	8.5
	0.0	13.0	19.0	9.0	16.0	24.5	21.5
	NaN	NaN	NaN	NaN	NaN	NaN	NaN
	3.0	24.0	14.0	8.0	6.0	24.5	6.0
	NaN	NaN	NaN	NaN	NaN	NaN	NaN
	NaN	25.0	16.0	29.0	25.0	12.0	NaN
	19.0	2.0	3.0	4.0	4.0	33.0	3.0
22 2	0.0	27.0	32.0	27.5	19.5	11.0	21.5





- Data obtained failed to satisfy every city ('NAN EXISTS')Data from different years
- Limited data obtained based on the chosen category

USE CASE



DESIGN

- Natural.csv
- human related.csv
- economy.csv
- entertainment.csv

Data Processing

Longitude & Latitude Matching find loc

rank_file.csv

Data
Processing
(City Ranking)

data_rank create rank

Html - Style User **User-interface** Interface layout_setup() app.callback User User Choose Choose 5 One Criteria Category user_DIY_graph total_graph **Plot City Plot City** Ranking on Ranking a Map

usmap_default

Plot on the map

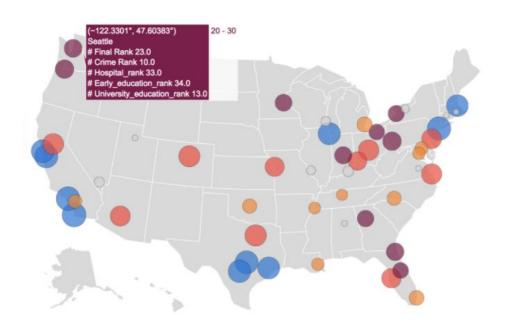
on a Map

usmap_choose

DEMO



The human related ranking of US big cities



Find Your Dream City to Live in the US

Powerd by City Fynders



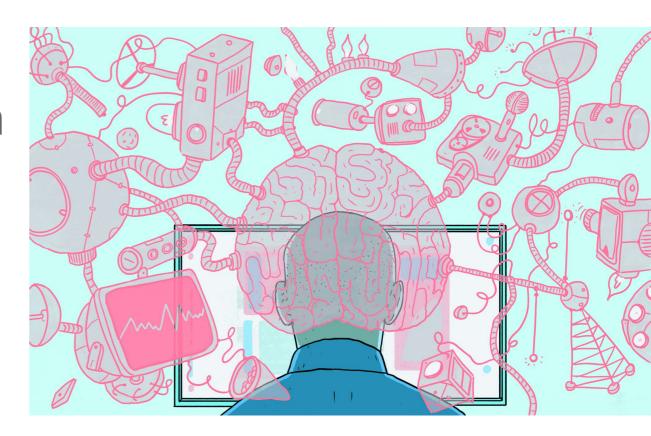
PROJECT STRUCTURE

(michaelhzc delete instruction.md		Latest commit 6cb2a4a 16 minutes ago
cityfynders	addinitpy	17 minutes ago
ata data	rank file	13 days ago
doc	change all to its dir	3 hours ago
examples	add example	an hour ago
paper paper	this is the paper of the project	13 days ago
submodule	submodule format change	6 days ago
tests tests	add test file	6 days ago
gitignore	add .DS_Store as ignore	2 days ago
:travis.yml	this script tells github to run the tests after every commit	13 days ago
LICENSE	Initial commit	2 months ago
README.md	add problem statement	27 days ago
setup.py	changeinit and add setup.py	42 minutes ago

https://github.com/UWSEDS-aut17/uwseds-group-city-fynders

WHAT DID WE LEARN?

- Basic recognition of pythonVersion control with github
- Programing styles
- Visualization with python
- Tests
- Software design



LESSONS LEARNED

- Set up a server displaying the webpage only
- Beautify and optimize the webpage
- Allow users to update the data
- More data analysis
- Apply machine learning to predict the changes of data

FUTURE WORK

