

FIT5147 BIKE SHARING DEMAND

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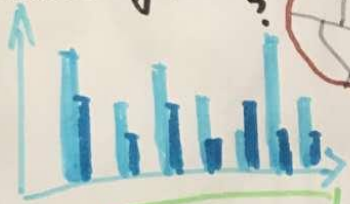


Bike sharing demand.

FILTER

Location affects bike sharing demand?

Washington DC



who is the "main user"???



Location
Year
Weather
job
Salary
Distance
Day
Month
User
Holiday
App
Amount
Male
working
Language



ideas

Categorize

2011.1



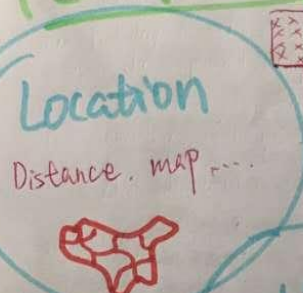
Weather affects demand??

2011.6

Autumn

VS

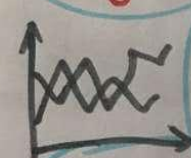
Spring



Distance, map...



User
Age, gender, job, amount...



Day

Year, Hour, weather, Month, Holiday...



Monday vs Sunday

7:am
12:00
14:00
18:00
22:00
What's the change???

Summer

VS

Winter



Boxing day
Holiday is the X?

2012.12

2011 VS 2012, Year is one factor??

Combine & Refine

sheet 2 How location affects Bike sharing demand?

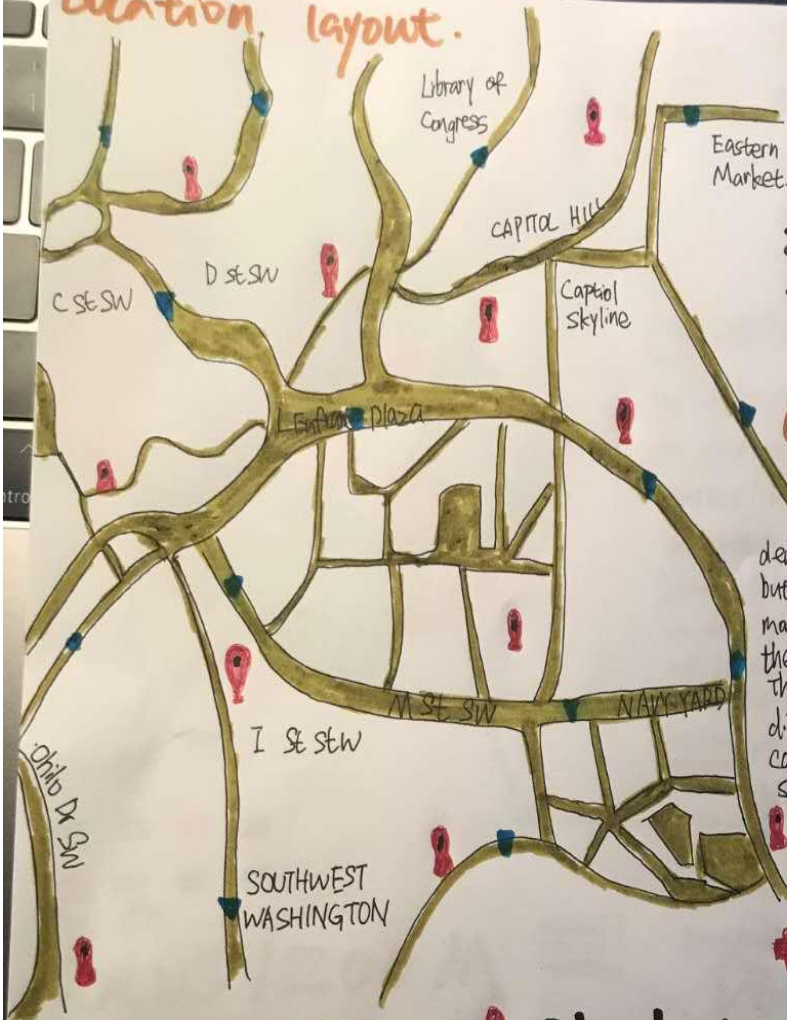
sheet 3 Who is the main user?

sheet 4 What is the relationship between different variables? #?

Will these visualizations assist

Bike sharing

Location layout.



Title. Location Heat map
authors Xinyu Zhou.

Date 6/7/2020.

Sheet 2

Tasks. How location affects demands?

Operations.

This heat map is to find how location affects demands. There is an interactive button. You can choose the year, month, holiday, season... Then the map colour will change. The different colours represent different demands. And you can move your mouse to bike sharing station to check details.

Discussion.

Heatmap clearly shows the situation of different areas.

Sometimes the change of demands has lots of factors. The heat maps can not represent them.

Focus/ 200 M Heat map.

Bike sharing station.

Year
2011
2012

Holiday

Month
1
2
...
12.

Season

Spring
Summer
Autum
Winter.



Station

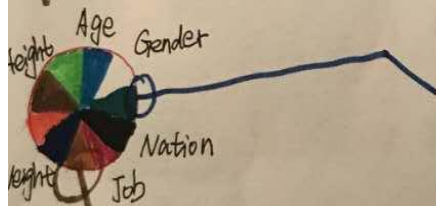


xxx
xxx
xxx
xxx

USER. LAYOUT.



FOCUS / ZOOM



Title User Rose chart

authors Xinyu Zhou

Date 6/6/2020

sheet 3.

Tasks who is the main user?

operations

This Nightingale Rose chart is to find the main user. The different colours represent different variables like gender, age, nation, language... There has an interactive button. You can choose the variables you are interested in, then it will become the classification standard of Nightingale Rose chart. The radius represents bilce sharing demands. Different colours mean these kinds of user has these attributes. When you mouse is in different area, you can get their specific details.



Discussion.

+ Compare the size of different classification, and the difference of classification value is not too big. It can clearly shows the main users' attribute attribute of bilce sharing in Washington. Scenes with few categories.

For example: if there are only two types: gender. They should be represented directly by pie chart or ring chart.

Day layout.

Timetable

Title. Timetable.

authors. Xinyu Zhou.

Date: 7.

sheet: 4.

Tasks: Find the relationship between demands and factors.

Operations.

This timetable is to show everyday's bike sharing demand. You can choose the year and month. Different colours represent different demands. And you can choose weather button to see everyday's situation. And this timetable also includes line chart to show the change of temperature, humidity, wind speed, ...

2011

AUGUST.

SUN	MON	TUE	WED	THU	FRI	SAT
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

FOCUS/ZOOM.

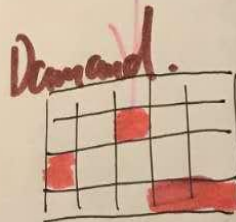
YERR

2011
2012

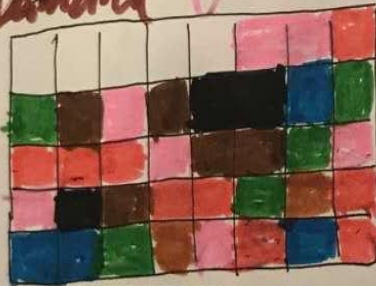
Month

1
2
...
12

Hdt.day



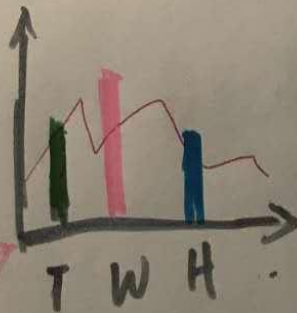
Demand



Discussion.

✚ Show the change of different dates clearly

✚ Sometimes temperature could affect wind speed. these variables are able to affect each other. It is difficult to represent them in one chart.

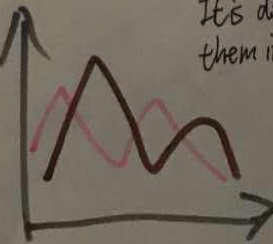


Weather

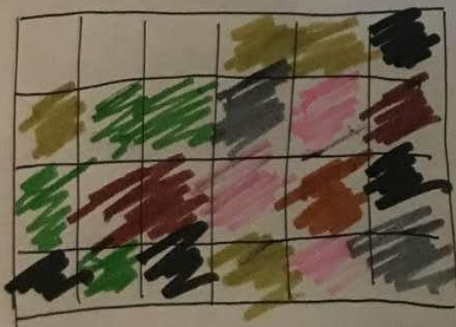
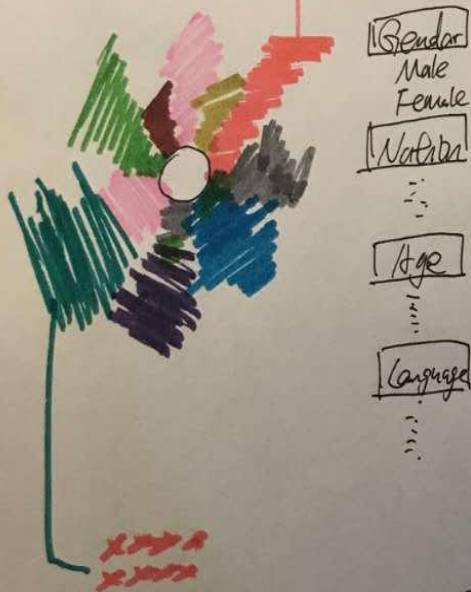
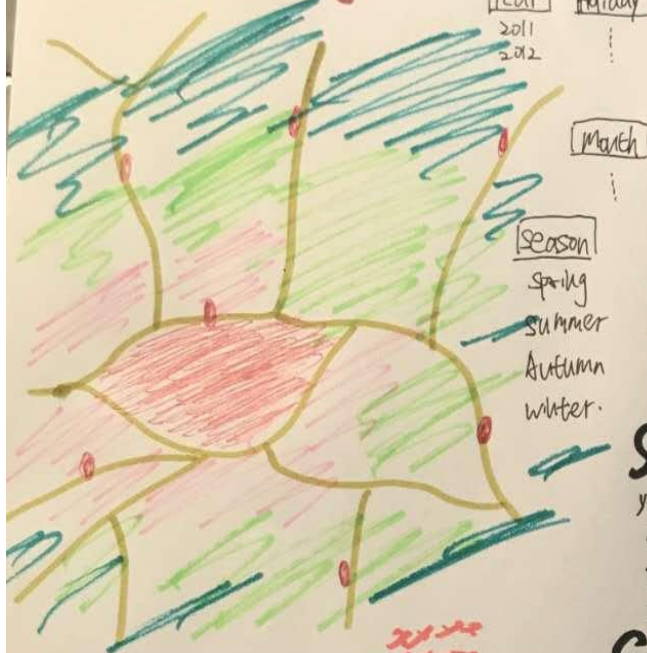
Demand



Good
Normal
Bad
Awful



Realization design



Title Realization design.

authors Xinyu Zhou.

Date: 7/7/2020.

sheet: 5.

Tasks: realization design.

Operations:

S2 click the button to choose the year, holiday, month, season The colours in the map will change. Move mouse to the bike sharing station. It will show more details about longitude and latitude.

S3. click the button to choose the Nationality, age, language ... The Nightingale Rose chart will set it to the classification standard.

S4. click the button to choose the Year, month, Holiday ... And you can choose weather button to see every day's situation.

Details: (R)

Time: 6 days

