
Lab Section: (Wed.)

Team #: 17

Members:

Sarah Swanz

Aravind Bharathy

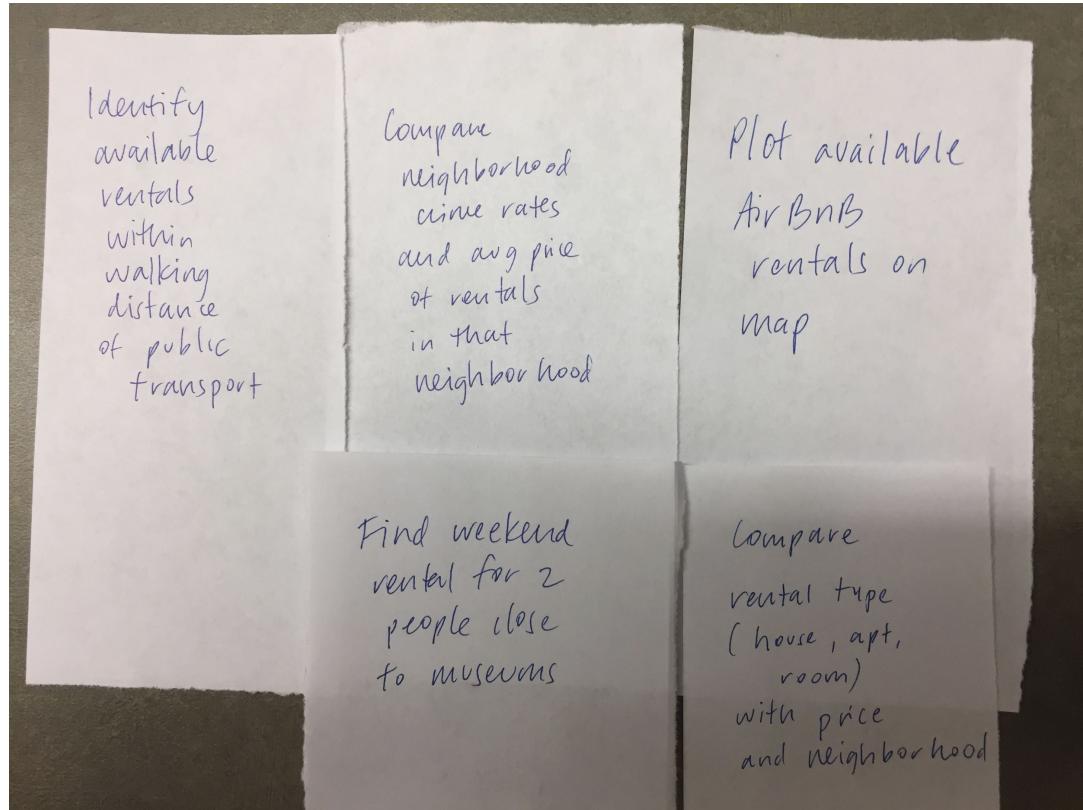
Yen-Ting Pan

Omkar Sunkersett

Hung-Wen Chen

Step 1 Mission Digest

Sarah Swanz : Domain Cards that I created



Designer 2 : Domain Cards that I created

Identify when to look for lowest price.

4

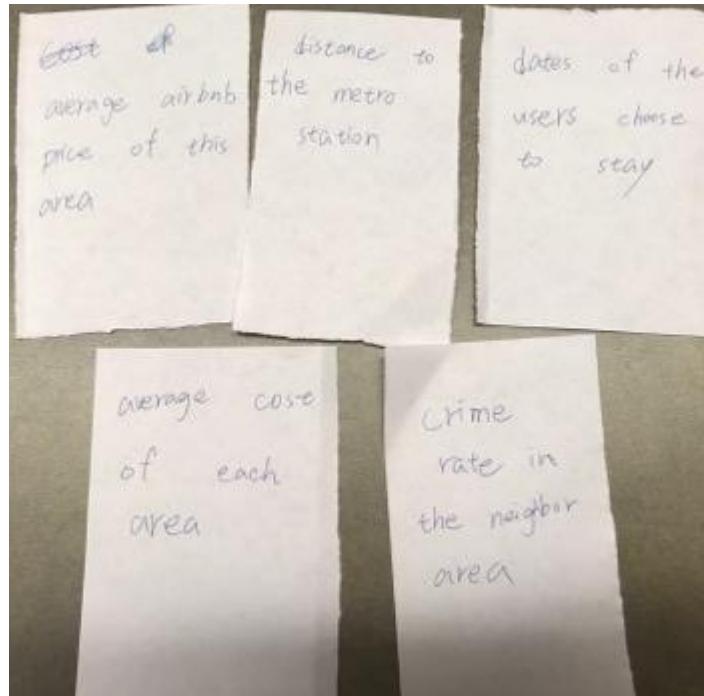
Identify host/listing information based on preferences.
(visually see which is good rather than analyse each host's listing).

Identify safe neighbourhoods for stay based on arrival and departure time.

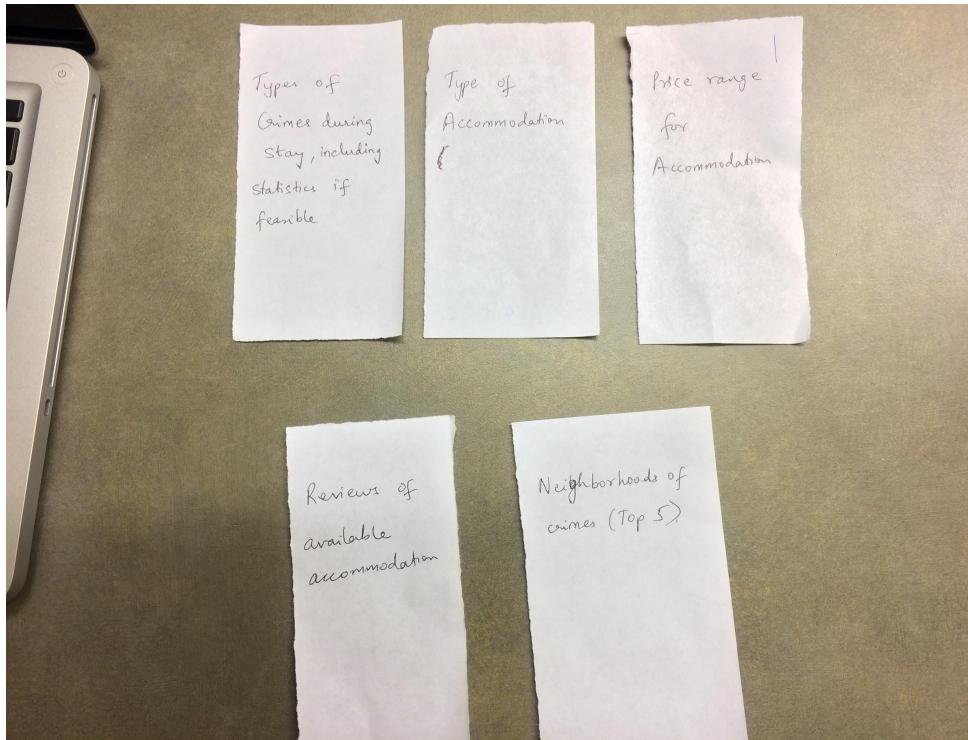
Identify neighbourhood to stay based on total budget
(Stay + travel (airport) + food places nearby, etc).
+ (travel to destination cost).

Identify best transit locations.

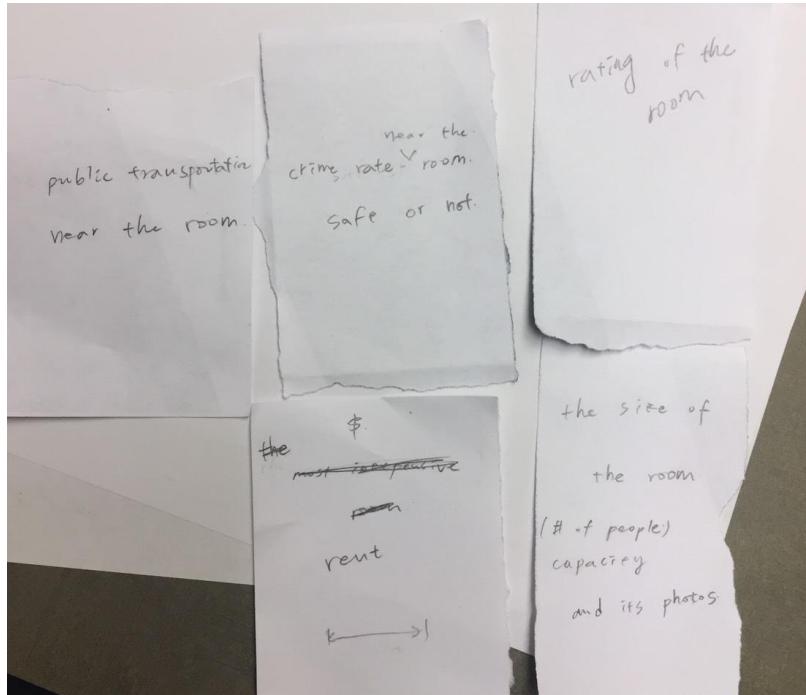
Yen-Ting Pan : Domain Cards that I created



Omkar Sunkersett : Domain Cards that I created

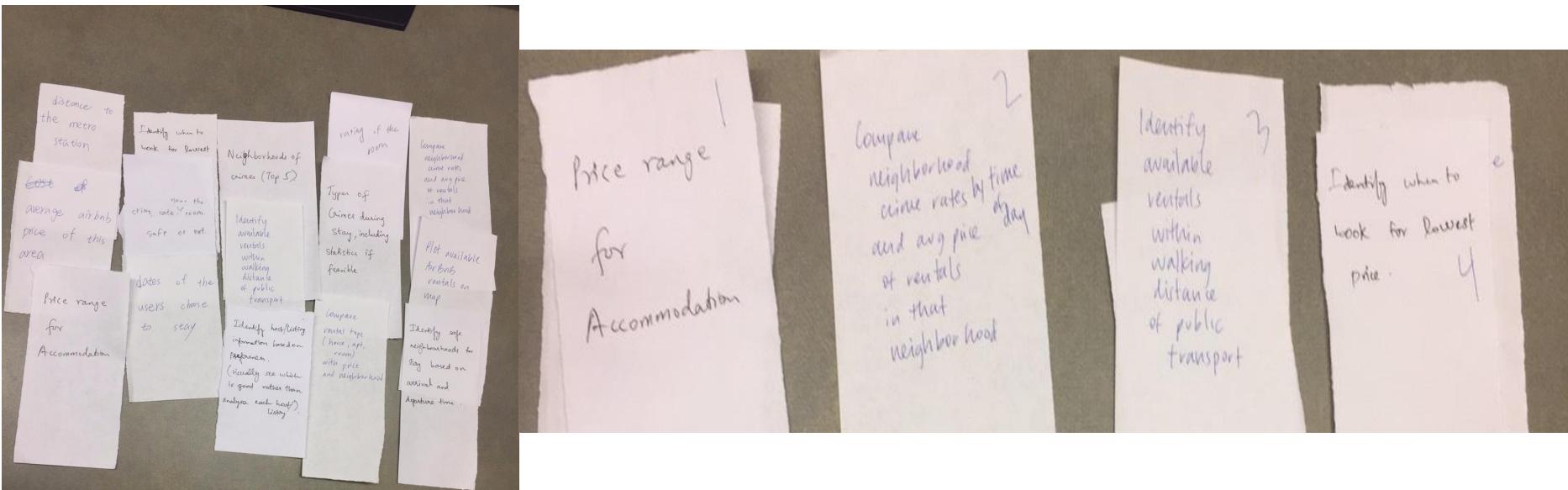


Designer 5 : Domain Cards that I created



Step 2 Required Domain Tasks (for the group)

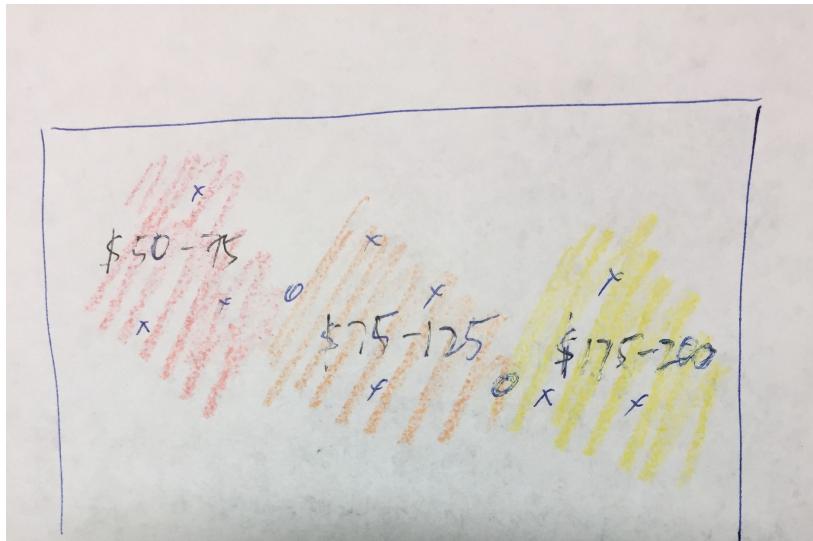
Team: Domain Cards that our team selected



Step 3 Individual Sketch 1

Sarah Swanz

Sarah Swanz : My first sketch in round 1



heat map of crime levels - color gradient or hue
overlay avg price range in that area
marks rentals with X
mark public transit with O

Comments

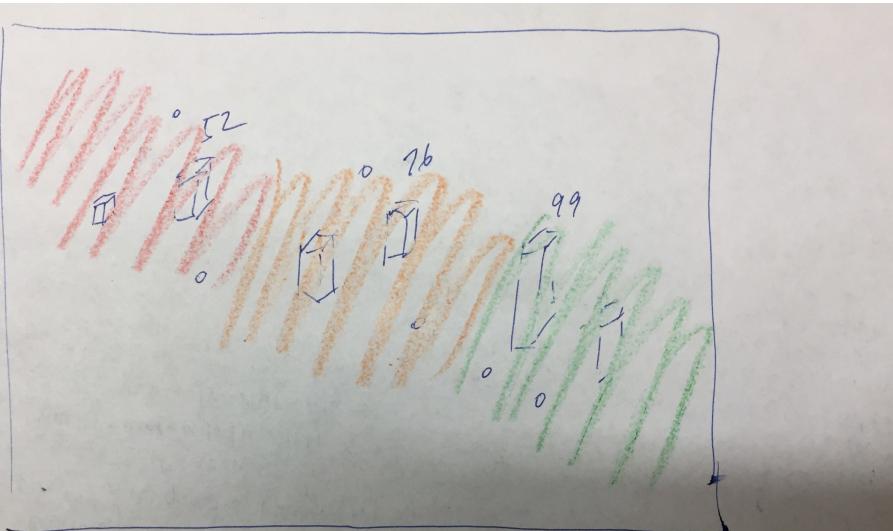
Heat map of crime levels - hue or color gradient

Overlay average price range for that area

X mark rentals

O mark public transit stops

Sarah Swanz : My second sketch in round 1



plot heat map of crime data
plot location of rental with bar
height of bar = price
plot transit with o
add number for host rating

Comments

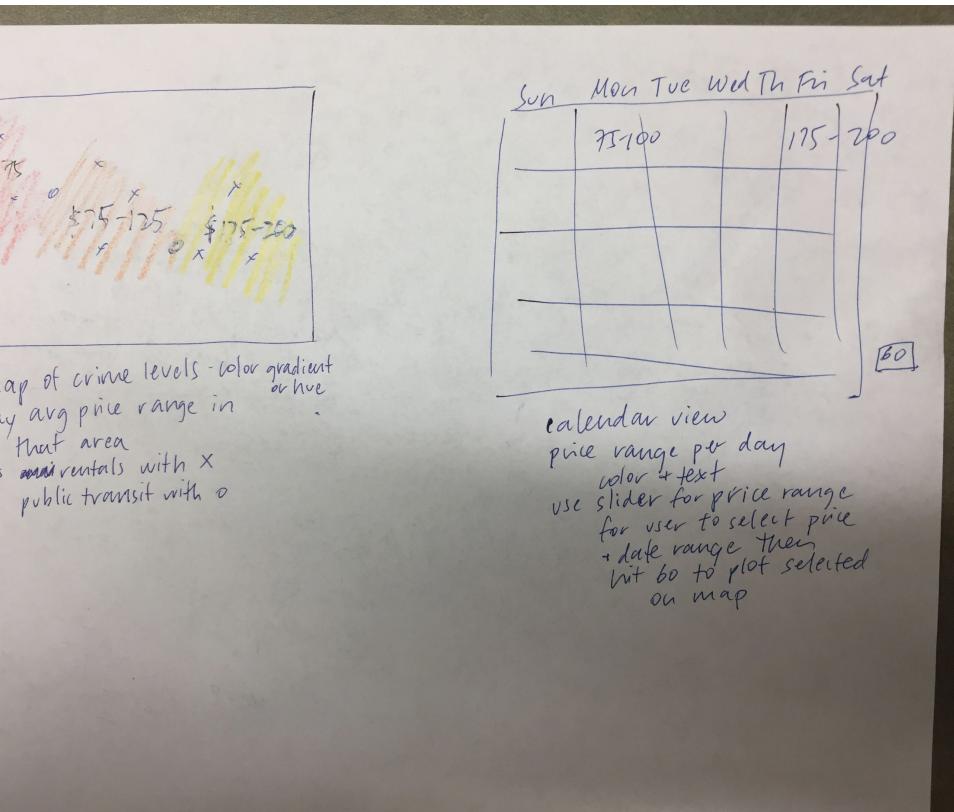
Heat map of crime levels - hue or color gradient

Bars indicate rentals with price encoded by bar height

Numbers indicate host rating

O mark public transit stops

Sarah Swanz : My third sketch in round 1



Comments (right hand sketch)

Calendar view for selected area showing price range by color and/or text

Use slider to select price and date range, then user hits enter to be taken to map that plots rentals meeting selection criteria

Aravind Bharathy

Data Required:

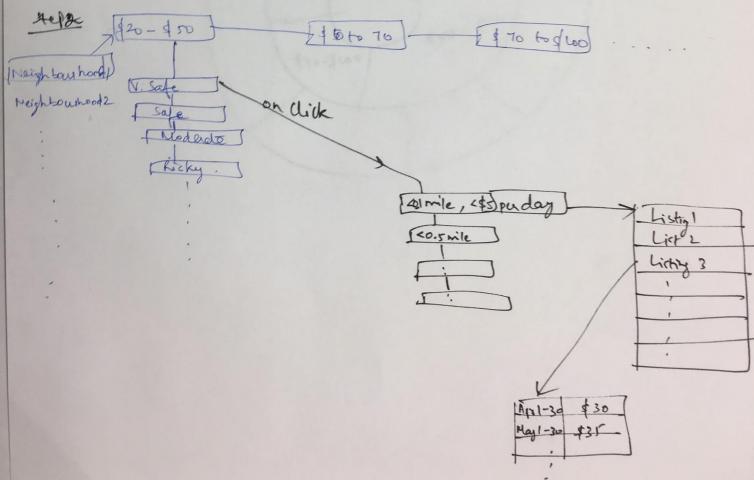
- 1) Airbnb listings data for a city with price information.
- 2) Crime data of the city by neighbourhood.
- 3) Public transport data of the city.



① Hierarchical:

Neigh → Price category → Neighbourhood safety → public transport convenience
(based on time)

Step 1 → choose ~~price~~ date

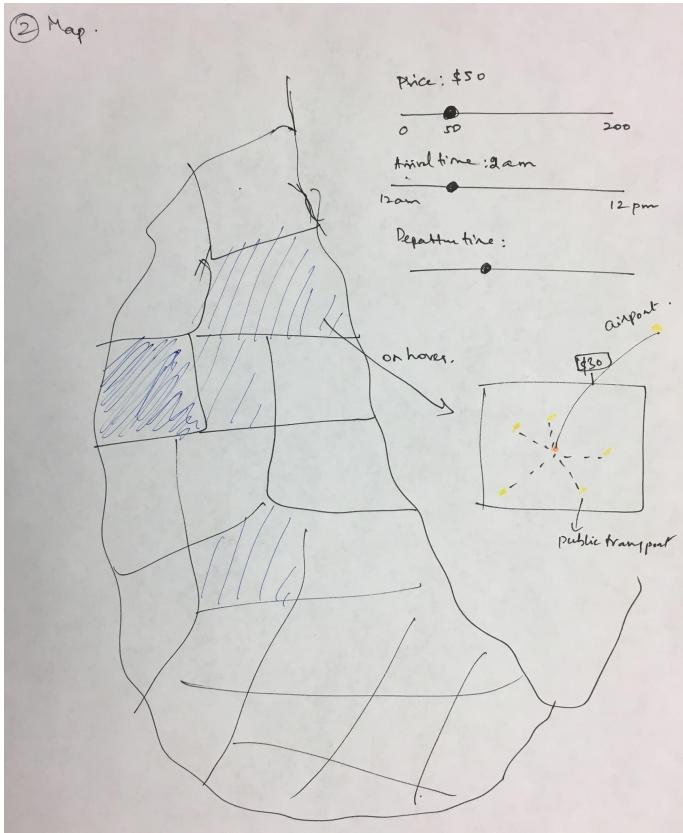


Sketch in round 1

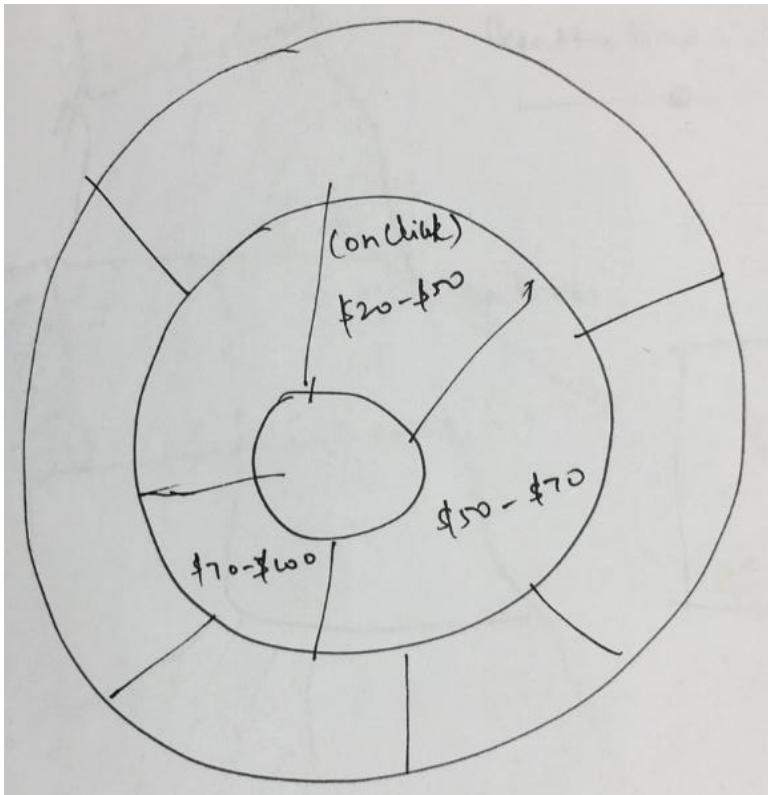
Comments

Designer 2 : My second sketch in round 1

② Map.



Designer 2 : My third sketch in round 1

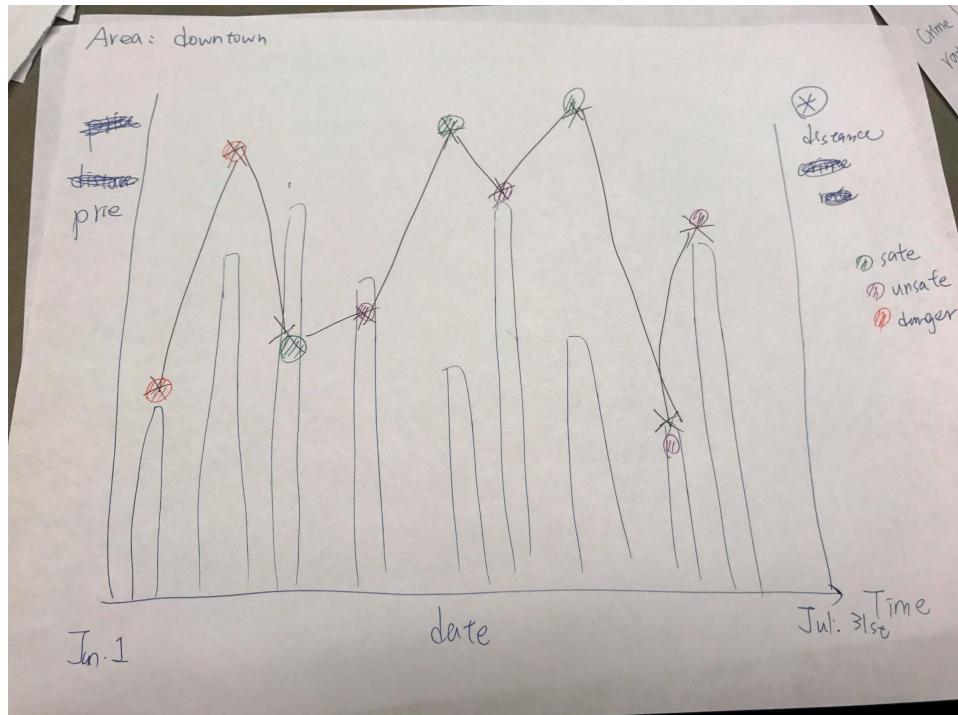


Comments

An expanding concentric circle pie chart where the size of pie indicates the number of listings matching the criteria.

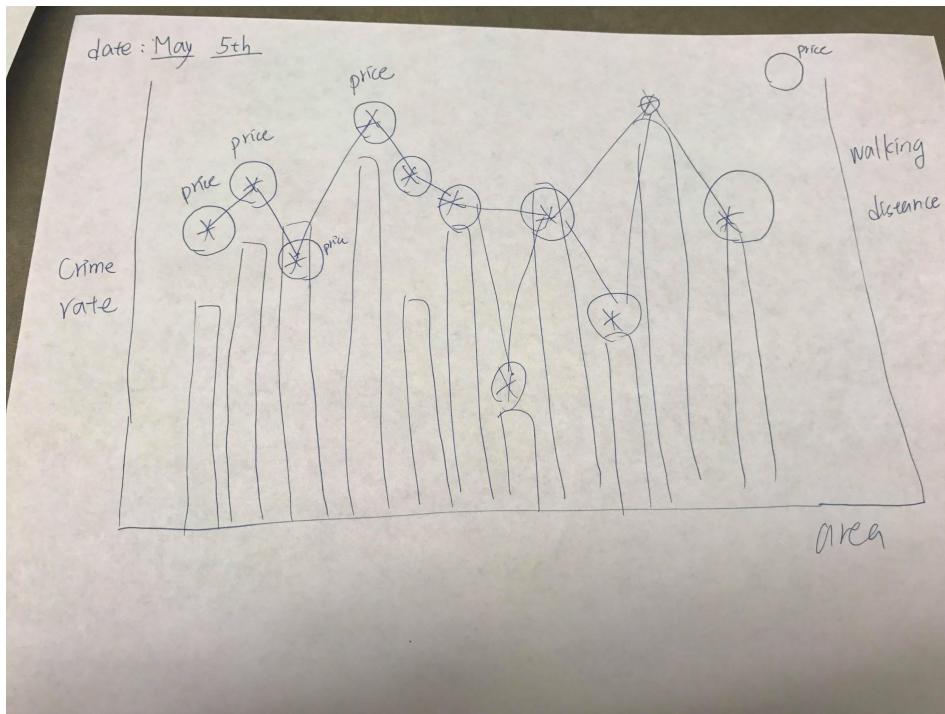
Yen-Ting Pan

Designer 3 : My first sketch in round 1



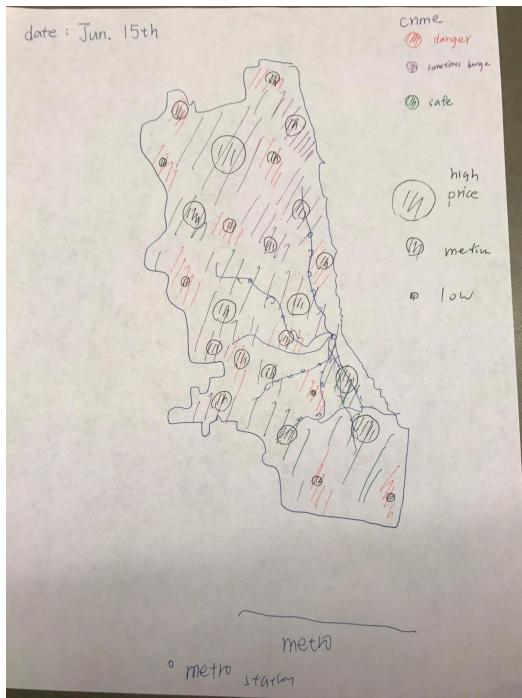
Combined price and crime rate to show the visualization of the airbnb in Chicago with chosen area

Designer 3 : My second sketch in round 1



Combined price and crime rate to show the visualization of the airbnb in Chicago with chosen date

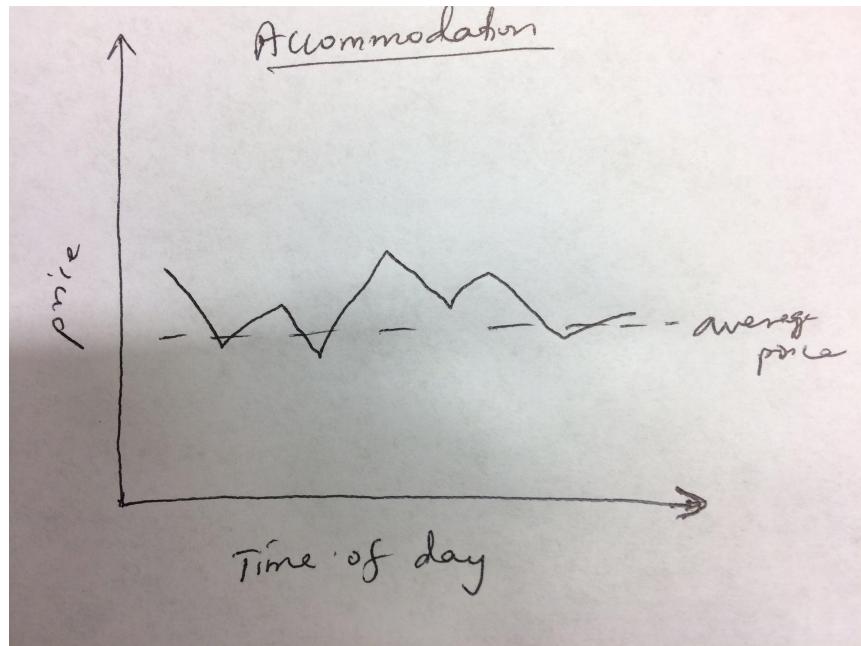
Designer 3 : My third sketch in round 1



Point out the price and distance to the metro station in Chicago and it is really easy to view all the parameters

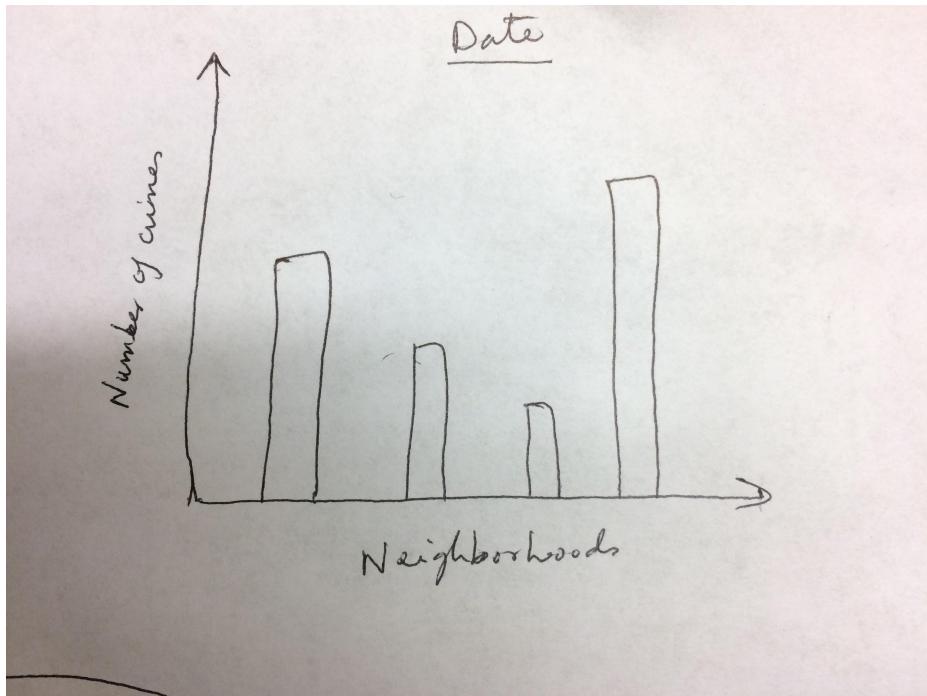
Omkar Sunkersett

Omkar Sunkersett : My first sketch in round 1



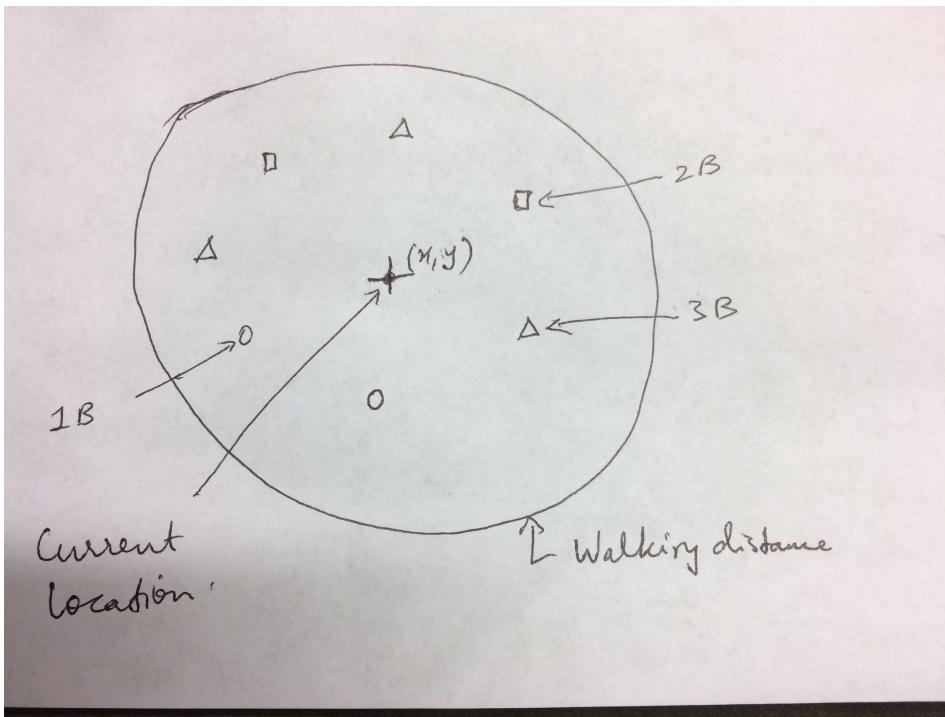
Prices of an accommodation for different times of the day

Omkar Sunkersett : My second sketch in round 1



Crime statistics per neighborhood per day

Omkar Sunkersett : My third sketch in round 1

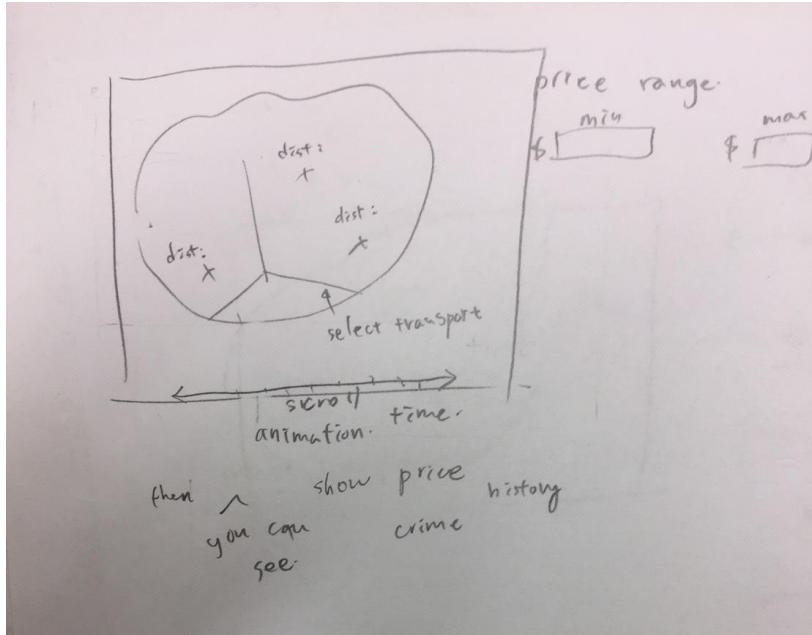


Types of accommodation within walking distance

Designer 5

Hung-Wen Chen

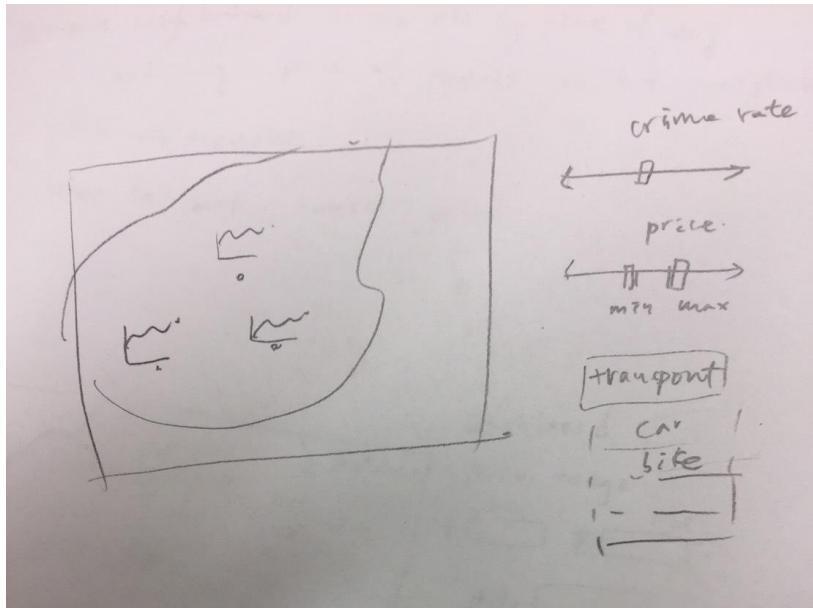
Designer 5 : My first sketch in round 1



Comments

Allow user to scroll the bar to show crime or price history of rooms

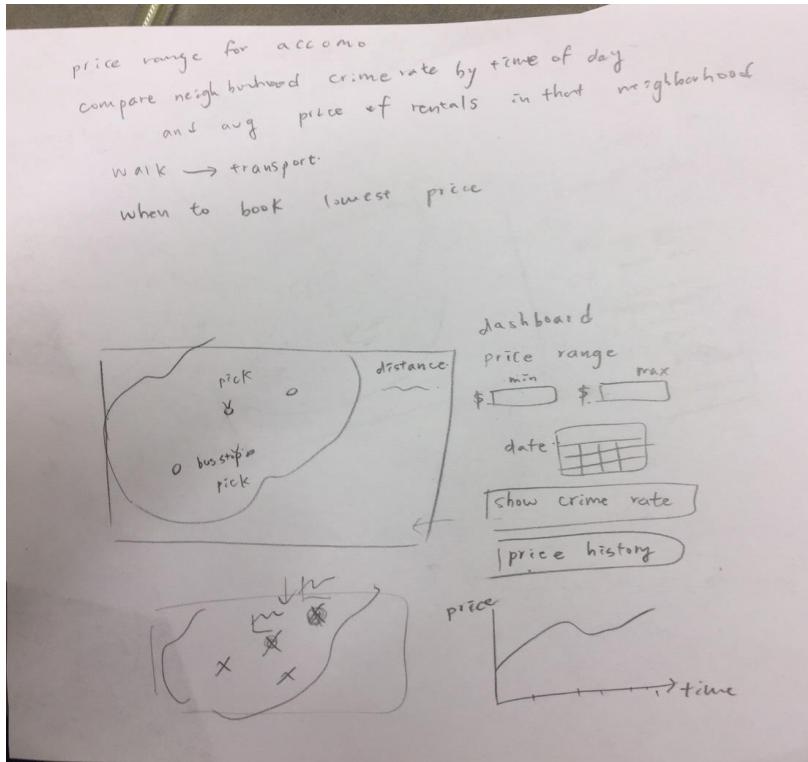
Designer 5 : My second sketch in round 1



Comments

Use dropdown for transportation choice

Designer 5: My third sketch in round 1



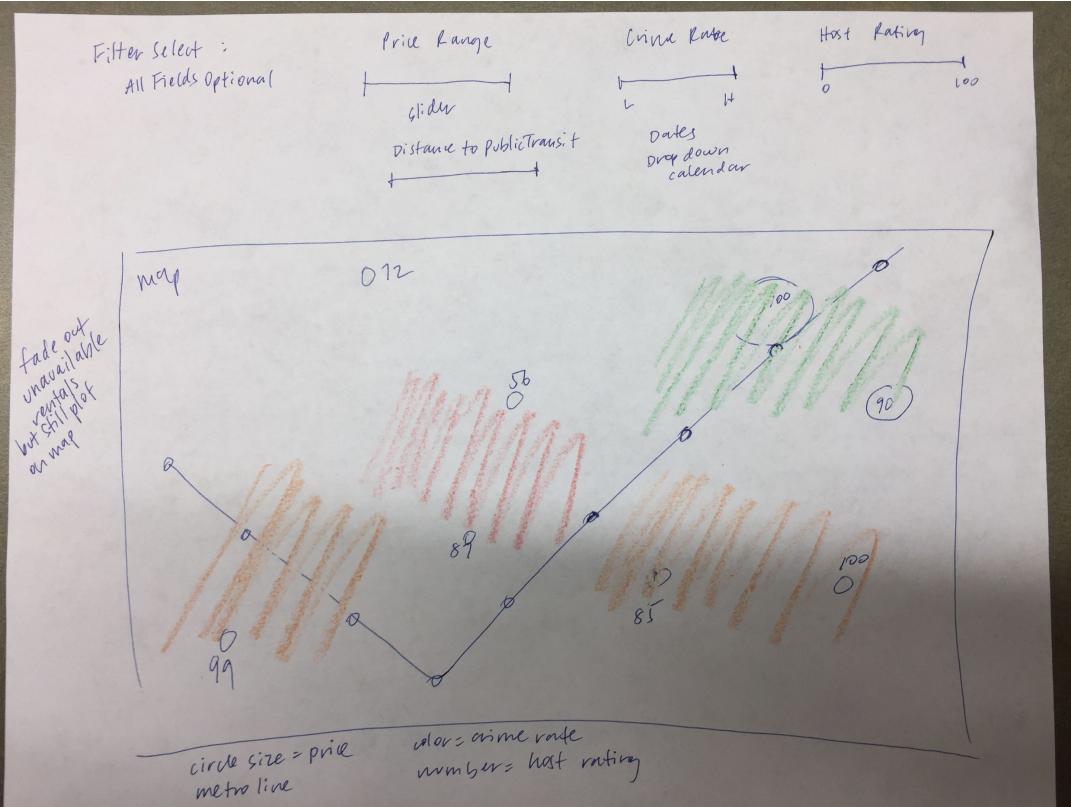
Comments

Size of the node encode the price

Click show crime rates button will pop out crime rate graph

Step 4 Individual Sketch 2

Sarah Swanz : My fourth sketch



Comments

User selects from filter

Heat map of crime rates

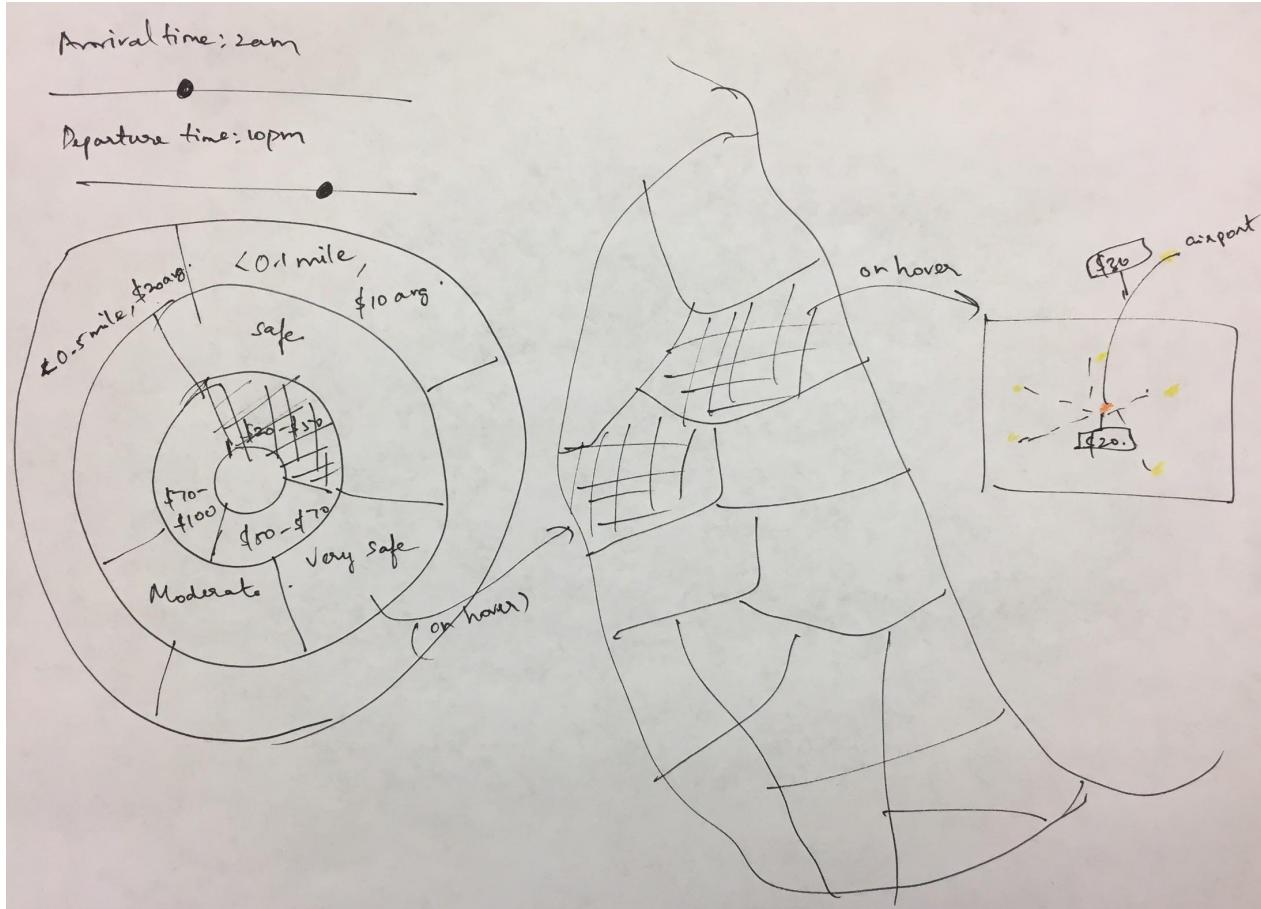
Metro line plotted on map

Circles = available rentals; size of circle = price

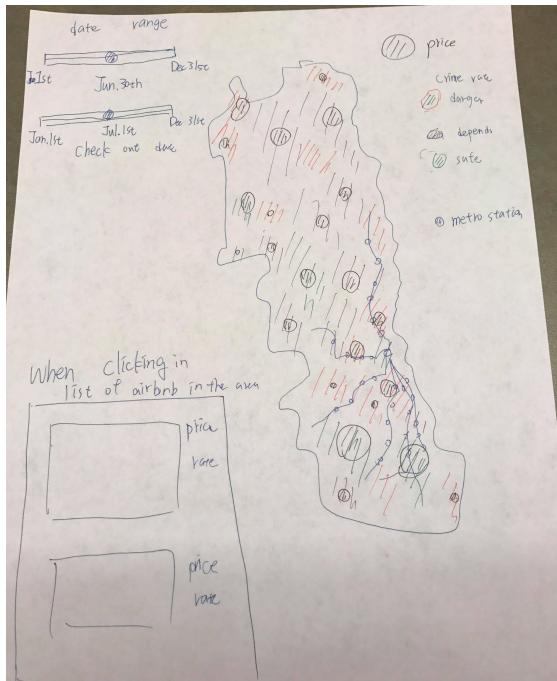
Number = host rating

Increase opacity for non-matching rentals

Designer 2: My fourth sketch

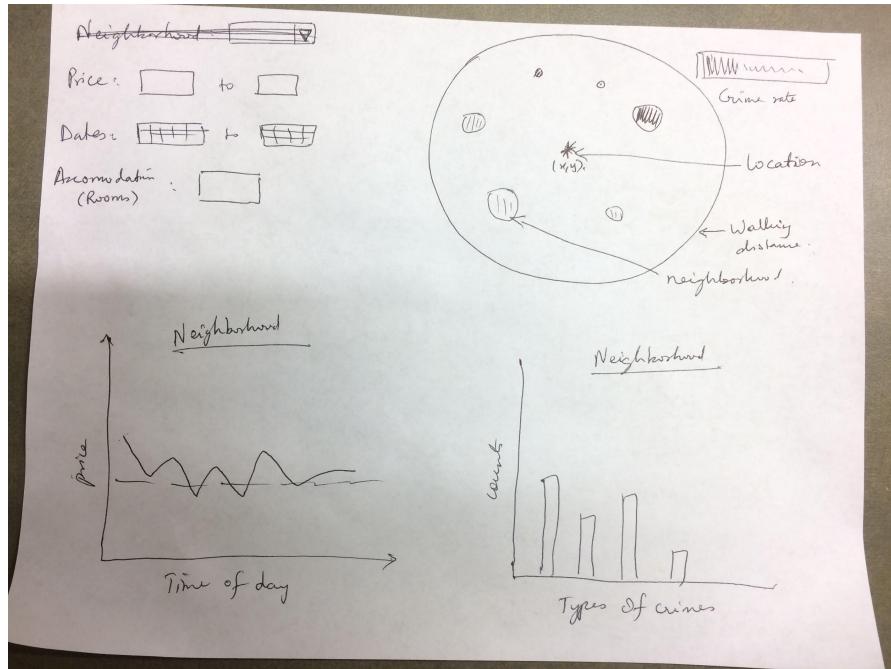


Yen-Ting Pan : My fourth sketch



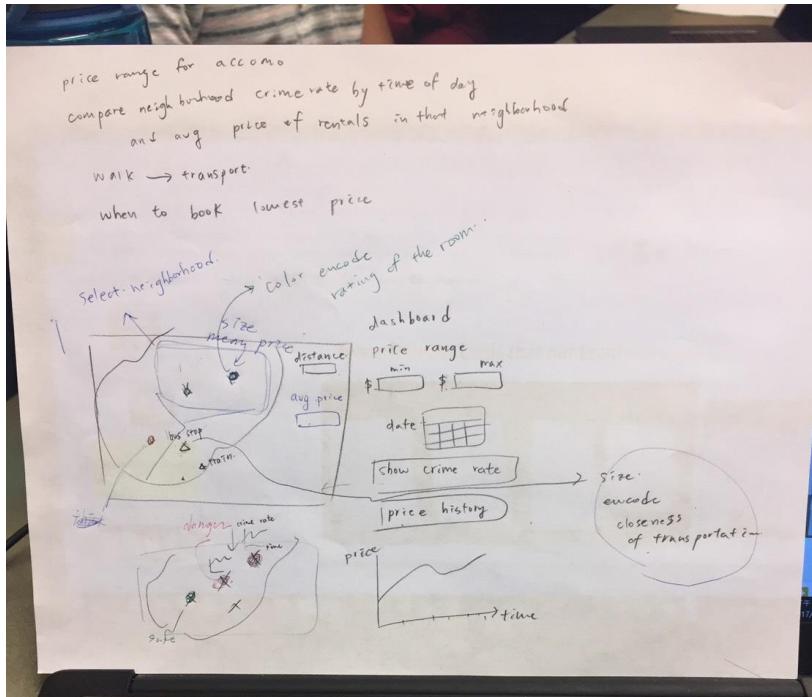
Add two bars to pick check-in and check-out date to show the price of airbnb in Chicago and make it easier to use

Omkar Sunkersett : My fourth sketch



More filtering options such as price ranges, date ranges, accommodation types, neighborhood sizes, neighborhood crime rates and types of crimes.

Designer 5 : My fourth sketch



Comments

Size of the node encode the price

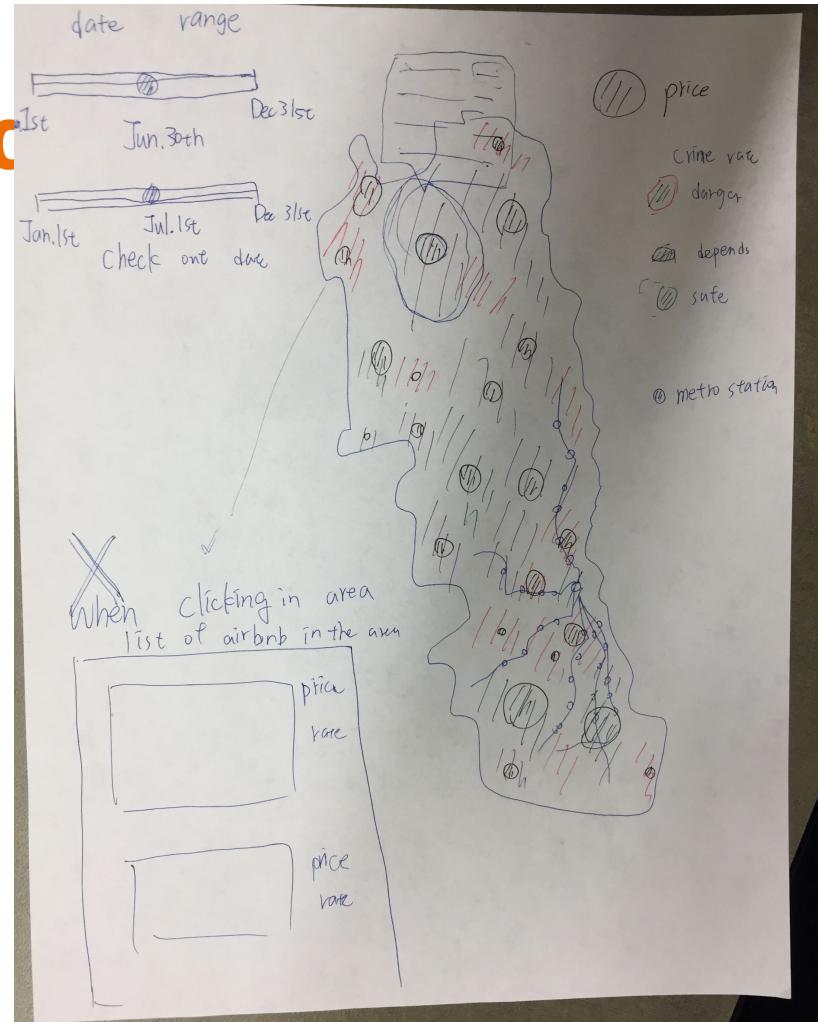
Use color to encode rating of the room and the safety of neighborhood

Click show crime

rates button will pop out crime rate graph

Step 5 Consensus Sketch

Team: Our Consensus Sketch



Description of Consensus Sketch

User will filter by price range (slider), crime rate (L-M-H), and distance to public transport

User will rank his/her preference for price/transport/crime 1-3

Algorithm will identify neighborhoods meeting criteria and add'l neighborhoods to consider based on ranking (eg, if crime is ranked 1, then a rental that costs more than the filtered price range (ranked 3) would be displayed for consideration)

Rentals that do not meet criteria may be displayed at different opacity

Map of selected city, with heat map of crime rates by hue

Metro and bus stations plotted on underlying map

Black circles represent neighborhoods or areas encoding average price for that neighborhood and likelihood of sellout over next 30 days

Circles will be color (gradient) encoded to reflect how well they meet the selected, ranked criteria.

When hover over area, pop up gives link to AirBnB listings for that area

Notes

Discovered that we do not have current rental availability data from AirBnB; we only have historical data about number of days available for next 30/60/90 days

Project will not have current availability (user cannot select dates) but will show likelihood of being sold out over next 30 days based on available data