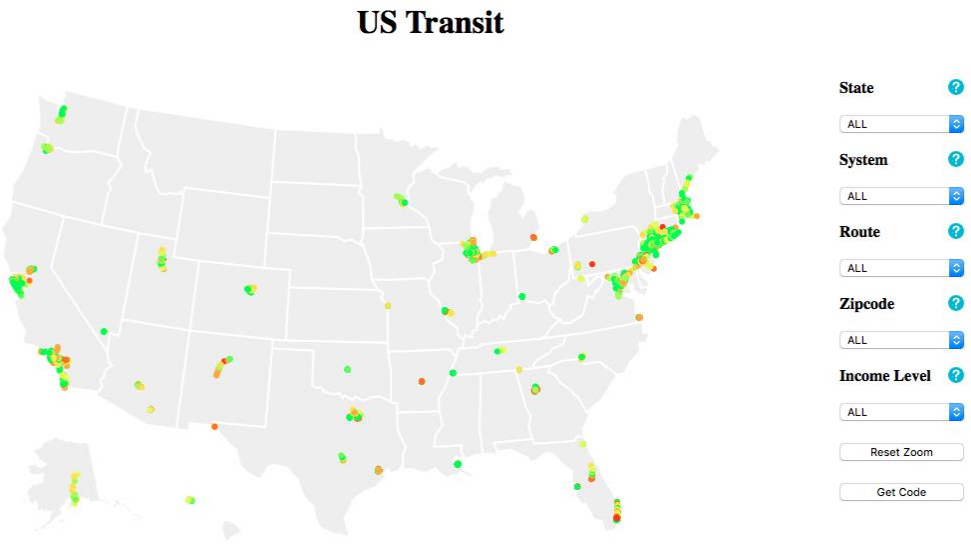
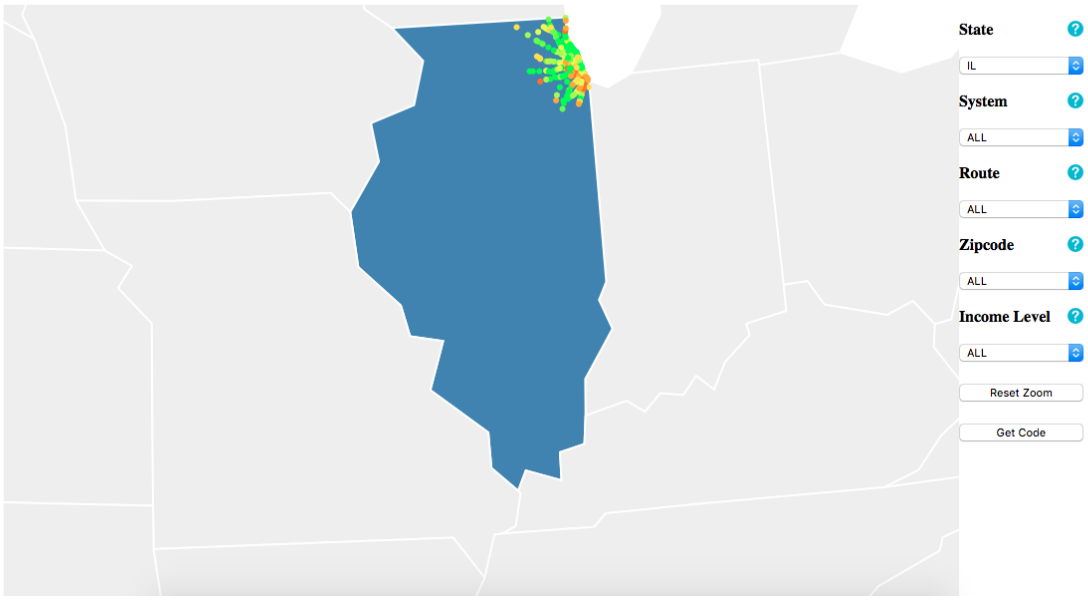
Evaluation Plan

Activity

1. We [Liam Fruzyna, Vidit Kalani, Reid Holben] will provide the subject with data from a combination of **Public Transit Stations**, **Routes and Stations**, and **SOI Tax Stats** in the form of an interactive web app. The transit stations in the data are plotted on the map as dots with the color of the dot representing the average income of the zip code. The subject will be instructed to adjust parameters to filter the displayed stations on the map of the United States.
    a. First, the subject will be instructed to select a state. The key here is to identify if the subject selects the state from the dropdown menu on the side or by clicking on the state itself on the map. A counter will track the total number of clicks on states on the map and number of selections from the state dropdown.

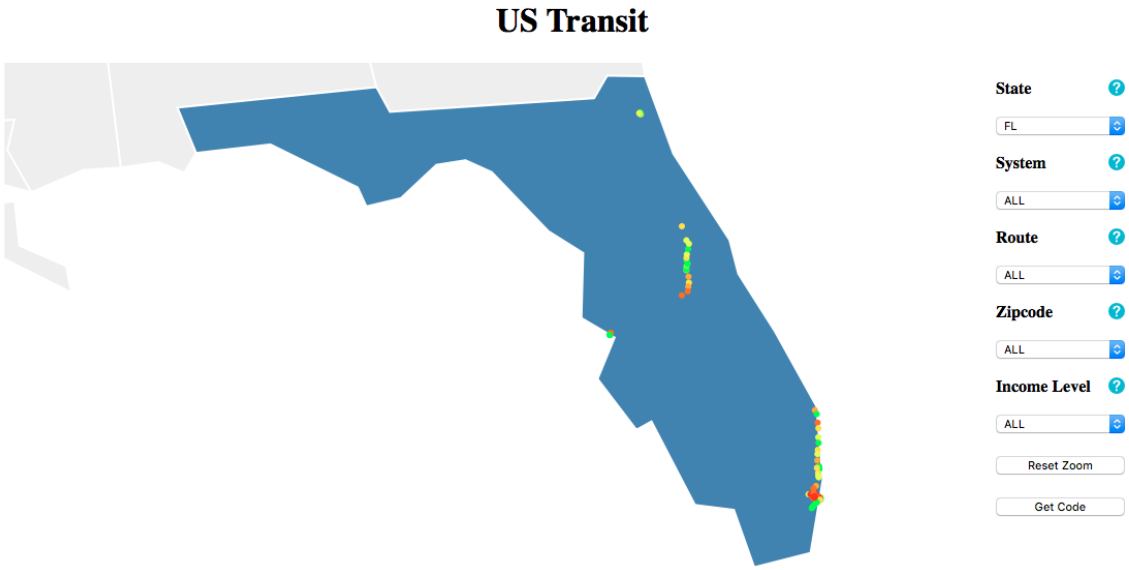


        i. Select California.
        ii. Select Texas, the map can be zoomed out by pressing “Reset Zoom” at the bottom on the side bar.
        iii. Select Alaska.
        iv. The ratio of total state clicks to total state dropdown selections will be compared to the age and education background of the subject in a two-way ANOVA.
    b. Second, the subject will be guided through filtering down through the options on the sidebar, in order to, determine the response time the side bar being on a specific side of the screen.



i. Select “Illinois” from the dropdown labeled “State” on the side bar.
    1. This is to filter the stations down to a reasonable number.
ii. Find and click the station “Harvard” located towards the Northwest Corner of the map.
    1. This will start a timer to get the response time to return to the menu.
iii. Select “Metra” from the dropdown labeled “System” on the side bar.
    1. This will end the timer.
iv. Find and click the station “Aurora” located towards the Southwest of the Metra system on the map.
    1. This will start another timer.
v. Select “RI - Metra” from dropdown labeled “Route” on the side bar.
    1. This will end the second timer.
vi. Find and click the station “Joliet” located towards the Southwest in the line on the map.
    1. This will start a final timer.
vii. Select the zip code “60406” from the side bar.
    1. This will end the final timer.
viii. For each time measurement, the time to change the dropdown will be compared against the subject’s handedness in a one-way ANOVA to determine if there is a preference for the placement of the sidebar on the left/right of the screen based on left/right handedness.

c. Third, the subject will be instructed through finding a specific line to interpret the data presented before him/her. The purpose of this is to get an idea of how the subject is interpreting the data so that it can be later compared to who the person is.



i. Select the state “Florida”.
ii. Select the system “MDT” from the side bar.
iii. Select the line “14456 - MDT” from the side bar.
iv. Determine how many stations are in poorer areas. Remember this number as you will be asked about it later.
    1. There are 2 yellow, 5 red, and 13 green.
v. The number of stations interpreted as being in poorer areas be compared to the gender and education background of the subject in a two-way ANOVA.

d. Finally, the subject will be instructed to click the “Get Code” button to receive a code to enter in the survey.

2. We will provide the subject with a survey in order to receive their completion code. This survey will ask questions about themselves, their background, knowledge of the United States, and their interactions with the web app.

Questionnaire

1. Do you consent?
    a. Yes
    b. No

2. Please enter the completion code from the web app.
    a. String of RegEx format [0-9]+-[0-9]+-[0-9]+-[0-9]+-[0-9]+-[LR]

3. How many stations did you believe were in poorer areas on the 14456 – MDT line?
    a. Options 0 - 20

4. Before today, did you know where the state Texas was on a map?
    a. Yes
    b. No

5. Before today, did you know where the state California was on a map?
    a. Yes
    b. No

6. Before today, did you know where the state Alaska was on a map?
    a. Yes
    b. No

7. How satisfied are you with the overall quality of our web app?
    a. Extremely satisfied
    b. Moderately satisfied
    c. Slightly satisfied
    d. Neither satisfied nor dissatisfied
    e. Slightly dissatisfied
    f. Moderately dissatisfied
    g. Extremely dissatisfied

8. Overall, how intuitive was our web app?
    a. Extremely intuitive
    b. Very intuitive
    c. Moderately intuitive
    d. Slightly intuitive
    e. Not intuitive at all

9. What gender do you identify as?
    a. Male
    b. Female
    c. Other
    d. Prefer not to answer

10. What is your age?
    a. Under 18
    b. 18 – 24
    c. 25 – 34
    d. 35 – 44
    e. 45 – 54
    f. 55 – 64
    g. 65 – 74
    h. 75 – 84
    i. 85 or older

11. Do you consider yourself Hispanic or Latino?
    a. Yes
    b. No

12. Regardless of your previous answer, how would you describe your ethnicity?
    a. White
    b. Black or African American
    c. American Indian or Alaska Native
    d. Asian
    e. Native Hawaiian or Pacific Islander
    f. Other

13. What is the highest education level you have completed?
    a. Less than high school
    b. High school graduate
    c. Some college
    d. 2 year degree
    e. 4 year degree
    f. Professional degree
    g. Doctorate

14. What is your marital status?
    a. Married
    b. Widowed
    c. Divorced
    d. Separated
    e. Never married

15. What is your current employment status?
    a. Employed full time
    b. Employed part time
    c. Unemployed looking for work
    d. Unemployed not looking for work
    e. Retired

f. Student
g. Disabled

16. What is your total household income?
    a. Less than $10,000
    b. $10,000 - $19,999
    c. $20,000 - $29,999
    d. $30,000 - $39,999
    e. $40,000 - $49,999
    f. $50,000 - $59,999
    g. $60,000 - $69,999
    h. $70,000 - $79,999
    i. $80,000 - $89,999
    j. $90,000 - $99,999
    k. $100,000 - $149,999
    l. More than $150,000

17. What is your dominant hand?
    a. Right
    b. Left
    c. Both

18. What US zip code do you live in? (Enter na if you do not live in the United States)
    a. 5 digit number