

Neighborhood Analysis Final Project Proposal

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The following document is a living document that will be periodically updated to show the progression of my final project.

Research Area

The research area in question is gendered experiences in the city. With a specific focus on how women experience transportation and public spaces compared to men. The resulting analysis should aid decision-makers in understanding the inequalities in terms of place-making for women and place-making for men, even in the modern city. The project will revolve around the City of Chicago for a city-level analysis.

Background Information

There is a consistent lack of information regarding gendered experiences in the city. Numerous reports show the income differentials between men and women across the world, many reports even show the education levels of women in the city, but very few quantitatively express the vast differences in how women perceive their neighborhood and city as opposed to how men perceive their neighborhood and city. The question at hand is who is the current built environment built for, and does the answer to that question deserve some rethinking.

There are some “homegrown” methods of quantifying women’s experiences in the city, from surveying samples of a population to inferring experiences based on available gendered data such as income or education level. Each of these methods share some insight into the experiences of women but the narrative surrounding the methods is limited. The aim of this project is to amplify the narrative supposing that the current built environment is not built with women in mind.

Proposed Methods of Analysis

Divvy Ridership Analysis

Using Divvy ridership data in the city of Chicago I will complete an exploratory analysis of the gendered usage of biking rideshare trips. The analysis will include a gendered comparison of the travel time of day, trip length, trip distance, and membership status of the user. These factors will help explain how, why, and when women use divvy compared to men.

This analysis will also be coupled with other data from the City of Chicago. This includes crime data, income data, and race data. Using these factors I will complete a regression model to see if any of these are good predictors of whether or not women will use divvy bikes. This analysis will provide insights into the factors that affect female ridership and possibly offer suggestions as to how to increase female ridership.

Gendered Twitter Analysis

I will create a model to predict whether or not a tweet is written by a male or female. I will use machine learning techniques to train this model on an existing database of gender linked twitter accounts and tweets. After the model has been trained and achieved 90% accuracy in gender prediction I will use it to gender a variety of tweets to lend in the quantification of women's experiences in the city. I would like to look at tweets relating to public transportation in Chicago, key words will be cta, train, bus, etc. I would also like to look at tweets related to public spaces and night time.

After gendering the tweets, I will run a sentiment analysis and compare the sentiments expressed between men and women in certain spaces. This sentiment analysis will be used to discuss the experiences of women in the city as they compare to men's.

Primary Data Collection

I will create a google survey to share with women around the city to determine how they fell in the city, how they feel on transit, and how they feel in public spaces. The results of this survey will be displayed in a variety of charts and visualizations. Depending on the feedback, it might make sense to run a sentiment analysis on the results of this survey.

Literature Review

A significant portion of my time on this project will be dedicated to reviewing existing literature regarding gendered experiences in the city. Since this topic is one that has had limited exposure historically, much of the literature is new and developing. One purpose of this project is to establish a collective library of literature that speaks on gendered experiences. This collective library will include links, summaries, and graphics of each source.

Open Ended Analysis

Since this is a living document I will continue to look for areas of analysis that can contribute to this project and will include them in this section. This section is for analyses that may not be included in the final project for this class, but I hope to include in the project in the future. Currently this section is empty.

Reporting Methods

The final goal for this project is to create an interactive website that shares the findings in this project. This website will include the results of the Divvy ridership study, the results of the gendered twitter analysis, the gendered experiences in the city library collection, and the results of the primary data collection. The website will be interactive with several graphics, maps, and stories told. I also hope to include a sort of bulletin board where people, possibly just women, can share their experiences in the city as well as share their thoughts for improvement in the city. This interactive portion will help bring eyes to the page and help viewers see real life stories. My vision for this website is pretty far advanced, I would like to eventually include videos of women's experiences in the city, among other

things. Because of this advanced vision, it is possible that the website submitted at the end of the semester may be incomplete. My hope is to fully complete the website before I graduate and establish the website as a landing page for everyone looking for more information on gendered experiences in the city.

Proposed Audience

I hope that this website will be available to everyone, for women it will serve as a support and understanding resource, for men it will serve as an education source, for decision-makers it will serve as an education and a suggestion document. My graphics will be accessible and understandable for the general public so that all can understand gendered experiences in the city.

Limitations

One topic that I haven't yet decided how to address is the experiences of transgender folks. I have a few options, I could ignore it, I could address it, and I could include it in my analysis. I don't want to ignore the issue and I'm not sure in what capacity I can include it in my analysis. I will continue to update this document as I solidify my approach to this issue.

Another limitation is the limited availability of gendered data, I plan to address this problem through my model. I'm not 100% sure that this will work but I am giving it my all and hope to succeed in this. Another factor of this limitation is that the results of my analysis won't be as technical because the reporting of a sentiment analysis can't be strictly quantitative. I hope that my results will still be taken seriously by the audience. This limitation will continue to influence the way I present my results.

I have some experience in making and hosting websites, mostly in WordPress, but I am excited to learn new methods. I am mostly concerned about how I am going to present my R graphics on the website and how I will make them interactive. I've used the Shiny package before to publish interactive maps online so I am hoping to find a way to incorporate that into my final project.

Conclusion

Since this document is living, it will continue to be updated as I continue in my work and ensure that my proposed methods of analysis and methods of presentation are feasible. I expect to encounter many road-blocks, frustrations, and difficulties but I am committed to the final result even if it isn't as grand as I envision it.