

Prospectus: Home Is Where the Heart Is

Improving Functionality and User Experience in the Search for Housing

How Gentrification Affected the Health Outcomes of Low-Income Residents in Washington, DC through 2013

A Thesis Project Prospectus

In STS 4500

Presented to

The Faculty of the

School of Engineering and Applied Science

University of Virginia

In Partial Fulfillment of the Requirements for the Degree

Bachelor of Science in Computer Science

By

Dong Lee

July 22, 2023

On my honor as a University student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments.

ADVISORS

MC Forelle, Assistant Professor of STS, Department of Engineering and Society

Briana Morrison, Associate Professor, Department of Computer Science

Rosanne Vrugtman, Technical Writing Advisor, Department of Computer Science

Home Is Where the Heart Is

Introduction

What determines if a person will live a healthy life? Eating more fruits and vegetables? A consistent sleep schedule? Regular physical exercise? All these factors are important, but perhaps most important is a person's housing situation which can determine if they will live a healthy life because it affects these factors and others (Helms et al., 2018). In fact, the idea that housing is a form of healthcare is a part of the ethos of some healthcare workers (Hanssmann, 2022). This idea is illustrated in lower-income communities impacted by redlining, a practice dating back to the Great Depression in which federal housing authorities drew maps and marked white neighborhoods with green for "safe" and black neighborhoods with red for "hazardous" and "risky". Black people and other minorities were segregated from white neighborhoods and forced to live in these redlined areas. Because their neighborhoods were seen as "risky", they received less investment than white neighborhoods year-over-year, resulting in continually lower incomes and fewer amenities (De los Santos et al., 2021). Fewer amenities such as grocery stores with healthy foods, parks in which to exercise, and decent hospitals contribute to lower health outcomes and life expectancies for people who live in these communities (Centers for Disease Control and Prevention [CDC], 2009).

Moreover, low-income and minority communities tend to face higher rates of gentrification (De los Santos et al., 2021). Gentrification is the process in which a low-income community is radically transformed with rapid investment and an influx of higher-income migrants. This can cause the cost of living to increase too quickly and push out or displace long-time residents. Gentrification can complicate the notion that low-income communities have lower health outcomes because, in some cases, disadvantaged residents can benefit from the

increased investment and improved amenities if they are protected by intentional anti-displacement policies (Demsas, 2021b). In many other cases, long-time, low-income residents are forced to move and look for new housing (De los Santos et al., 2021). Looking for housing alone can be daunting and stressful, especially when you are being forced out of a home you have lived in for most of your life (DeLuca et al., 2023). There are many ways to look for housing, especially using websites, but research shows that they fail to account for gentrification and the lower health outcomes facing low-income communities, much less the health outcomes of these communities after they have been gentrified. Failure to address this issue may lead to worsened health outcomes and reduced life expectancies for disadvantaged people who may rely on these methods to look for housing.

This paper proposes a project to ameliorate the complex issue of gentrification and its effects on the health of low-income people from both a technical and a science, technology, and society (STS) perspective. Both perspectives must be considered as addressing the problem of gentrification and health is a complex sociotechnical issue; considering one without the other may leave behind unrealized benefits while causing preventable harm. The proposed technical project is a web application that helps renters by making it easier to search for housing and protect their current housing situation. This solution will build upon current methods of housing search by aggregating listings in one place, allowing users to inform each other based on past housing experiences, and connect users to legal and community resources, among other features. The proposed STS project will explore the following question through the theoretical lens that technological artifacts have politics: How does gentrification affect the health outcomes of low-income residents in Washington, DC?

Technical Project

There are many ways to find housing: newspapers, physical signage on available properties, and websites such as apartments.com, Zillow, Craigslist.com, and even Facebook. In a US Census Bureau survey from 2019 to 2021, 46.0% of renters used such websites to find their homes (Rhodes & Bragdon, 2023). Each website has a variety of different listings offered by various groups, from individuals offering rooms in their houses to property management corporations leasing unfurnished units. Listings typically include photos of the housing unit, a map of the area, the address, the number of bedrooms and bathrooms, some amenities, and the price of rent; see Figure 1.

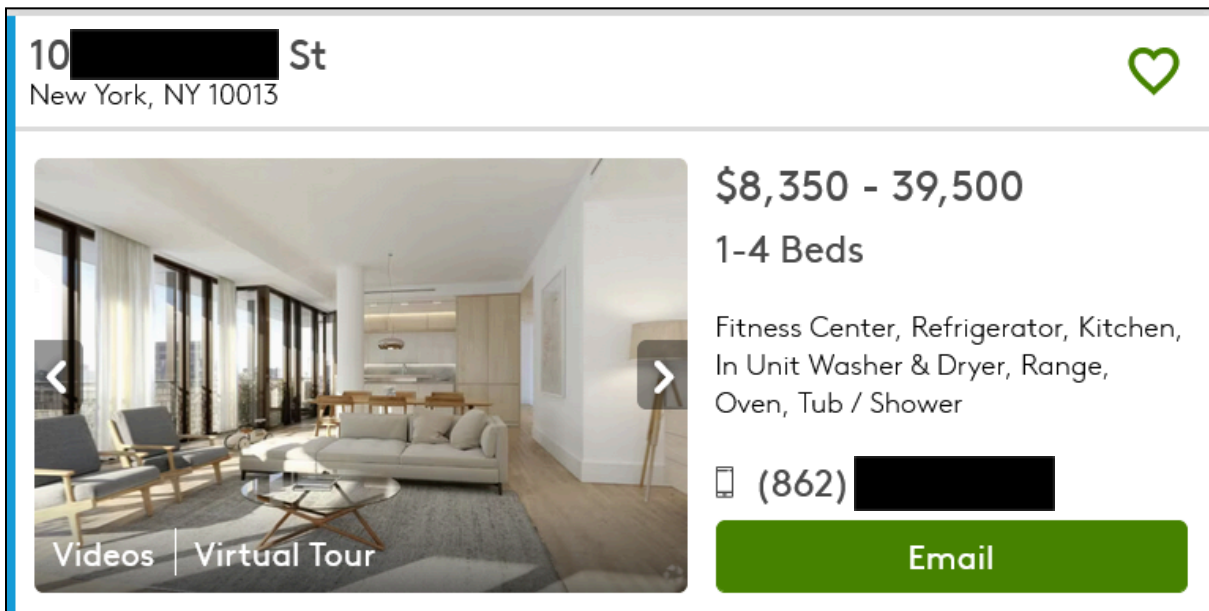


Figure 1: Apartment Listing and Elements (CoStar Group, Inc., 2023)

Renters may look at as many websites and listings as possible in the time available to find the best choice (Rhodes & Bragdon, 2023). In the same Census survey, 58.5% of Americans who ended their search early did so because they were forced to move, suggesting that the search process could be improved (Rhodes & Bragdon, 2023).

Current housing search technologies and the ways they can be used make it difficult for people to find housing. For example, listings suffer from inaccuracies and potential scams (Hess, Acolin & Walter, 2021). A renter in desperate need of housing may call about a listing that is still on a website even though it was already leased days ago, wasting crucial time and energy in a precarious situation. In fact, the search for housing can take a psychological toll on low-income renters (DeLuca et al., 2023). A flawed search process is especially concerning when a failure to find housing can lead to homelessness (DeLuca et al., 2023). With 46.0% of renters and 93.0% of homebuyers using some sort of online website in their housing decisions, a solution that improves the housing search process could benefit millions (Rhodes & Bragdon, 2023; Use of, 2019).

The technical project aims to design a mobile web application that will build on the flaws of the housing search process and help renters find new housing or protect their current housing situation against gentrification and displacement. To help users find housing and protect their current housing, the following application features are proposed:

- application will recommend listings based on user preferences;
- listings can be posted directly or aggregated from different websites and online newspapers;
- listings will update frequently to maintain accuracy;
- in addition to typical information, listings will have:
 - reviews and ratings from current and previous renters;
 - a gentrification risk score based on the area itself and surrounding areas;
 - local amenities such as grocery stores, parks, libraries, etc.;
- SMS and offline modes will allow users without Internet to access some functionality;

- legal, housing, and aid resource pages, e.g., contacts for advocacy organizations;
- forums to share housing problems, recommendations, and solutions.

These features aim to improve the search process and benefit lower-income renters based on research. Rhodes and Bragdon found that wealthier renters tended to use websites while lower-income renters tended to use word-of-mouth to find their homes (2023). Low-income communities are also less likely to have Internet access (de Wit, 2023). Offline-capable and SMS-based applications offer users a way to access timely informational resources without needing Internet access (Singla & Bhatia, 2015). Resources to protect renters are necessary because landlords have been found to ignore issues such as maintenance requests and pest infestations, and housing authorities have been found to ignore calls and voicemails from low-income renters (Hernández, 2016). References such as research papers and interviews will be consulted to better understand the needs of low-income renters and adjust the proposed features. The project will apply research on search engines, recommenders, and machine learning algorithms. The latter can recommend relevant listings and remove outdated listings (Manisor et al., 2021). They can also identify listings with a high risk of gentrification (Yoo, 2023). Research papers, technical documentation, and technology conference proceedings will be used to inform the application's design.

STS Project

“It’s bittersweet. On one level it’s good to see black culture recognized [referring to the black-named or themed restaurants, bars, cafes, and housing developments], but on another we (blacks) are not able to enjoy it.”, said Jessica Gordon Nembhard (Hutson, p. 142, 2015).

Nembhard, a political economist and leader of Organizing Neighborhood Equity DC, is referring to Shaw, a historically Black neighborhood in Washington, DC that underwent gentrification and

saw the majority of its Black residents forced out of their homes. The residents of Shaw are not alone in their experience as over 3 million people in the US are affected by gentrification (Richardson et al., 2020). Studies suggest that gentrification is responsible for housing insecurity and homelessness (Richardson et al., 2020). Other literature finds that where someone lives largely determines their health (De los Santos et al., 2021). Some literature acknowledges that gentrification affects health, especially because low-income areas that are often targets of gentrification correlate with negative health outcomes due to redlining. However, this area requires more research, especially in the context of gentrification.

The relationship between gentrification and the health outcomes of residents is poorly understood because gentrification is a process of varying stages involving the movement of people (Schnake-Mahl et al., 2020). Indeed, low-income communities face poor health outcomes, but what happens when they experience only partial gentrification? For example, a community may see an increase in amenities such as grocery stores offering healthier foods and the removal of polluting factories without the displacement of its low-income residents; this is a simple example of community revitalization (National Low Income Housing Coalition, 2019). This state of partial or stalled gentrification has been observed in 1980s Washington, DC, which went on to become one of the most gentrified cities in the 2000s and 2010s (Williams, 1988). How are communities revitalized without the destructive effects of gentrification? By examining gentrification and the effects of its varying stages on low-income communities and their resulting health outcomes, more informed and effective policy decisions and technologies can be made to better address it and perhaps harness its power for good. If this area of knowledge is not researched further, future housing policy and other technologies may lack the insight necessary to better protect housing and health outcomes for low-income people.

In order to contribute a greater level of understanding to this area of knowledge, the proposed research project will examine how gentrification displaces and forces low-income residents in Washington, DC to search for housing and how this process affects their health outcomes. The case of gentrification in Washington, DC is examined in part because the city experienced the highest intensity of gentrification out of any other US city or neighborhood for over a decade (Shaver, 2019). Despite no longer being the most gentrified city in the US, it remains highly gentrified every year (Austermuhle, 2020). In “Do Artifacts Have Politics?”, Langdon Winner contends that technological artifacts are imbued with political implications. Regardless of intention, technologies can affect political issues or embody political motives. Politics can refer to government policies, but they can also refer to hierarchies, power dynamics, and relationships between different groups (Winner, 1980). Because gentrification involves policy and power dynamics based on race and wealth, the idea that technologies have politics will serve as a basis for the research project and related questions. Accordingly, policy analysis will be employed to analyze the effectiveness of federal and local housing policies in preventing or exacerbating gentrification and displacement and how they manifest in DC communities. Additionally, the project will utilize a case study analysis of neighborhoods in Washington, DC as their residents experience gentrification, the need to search for new housing, and impacts to their health and livelihood. This case study and supporting reference material include interviews, historical research, and ethnographic and geospatial data in addition to other media. Lastly, a literature review will be conducted to analyze the research on gentrification and health outcomes, with the goal of understanding how they are related.

Conclusion

The proposed research project comprises both a technical and STS project involving the problem of low-income people seeking decent housing, and thus, healthier lives. The technical project proposed is the design of a web application offering users the ability to find housing or protect their current housing situation. The success of this project would result in a powerful housing search tool for those who are disadvantaged in the housing search process (DeLuca et al., 2023). The STS project will explore how gentrification and its complex manifestations affect low-income residents in Washington, DC and their health from the perspective that technological artifacts have politics. The success of this project would lead to a greater understanding of gentrification, displacement, and how vulnerable populations and their health are affected. This knowledge could return power back to low-income people by informing the design of technologies like the technical project and housing policies. Rather than applying one project or the other, the combination of both projects better addresses the complex issues of gentrification, housing, and health, opening the potential for happier and healthier communities in the future.

Word count: 2075

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