Get Off Grounds: A Review Platform for UVA Student Housing

(Technical Paper)

To What Extent Does Review Platforms Provide Wiser Decisions and Relieve Stress?

(STS Paper)

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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

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Introduction

Student housing is significant for UVA students. According to the urban institute, at least 79% of college students live in off grounds apartments across the entire United States (Kristin Blagg and Victoria Rosenboom, 2017). According to apartments.com, the average rent in the Charlottesville area is $1635 per month (Apartments.com, 2022), which is equivalent to $19620 per year. Considering that, according to Student Financial Services of UVA, the average tuition for in-state students in the school of engineering and applied sciences across 4 year is around $22,850 per year (Student Financial Services, 2022), students pay the same order of magnitude of money for tuitions and housing. Student housing is a significant financial investment for UVA students.

On the other hand, off ground student housing is difficult for UVA students. Typically, a lease period lasts one year, from August, to July of the next year. The current industry standard is to start asking students to sign a lease as early as October of the previous year, leaving students with little time to research and review their options. My teammate and I built a website for students to post and read reviews for off grounds apartments. We find students have a positive experience using our website. Future work is needed to deploy it on AWS for scalability, register a custom domain name, and implement additional features customer-obsessively.

Technical Discussion

Currently, there is no platform for UVA students to look for off grounds housing. Students post reviews on Yelp, Google Maps, and r/UVA, but these reviews are unstructured and unorganized. We built our website using Django (Django Software Foundation, 2022), a python-based framework for web development. We used sprints to manage our work, where we aim to build a major feature every two weeks. We used GitHub (GitHub, 2022) for coordination, and GitHub Actions for continuous integration. We deployed our website on Heroku (Heroku, 2021). The project is finished, but I am expecting to deploy it on AWS and advertise it to students this semester before when the local landlords send out the renew offer for next year leases. My technical advisor is Danial Graham from the Department of Computer Science in the School of Engineering and Applied Sciences in the University of Virginia.

Setting up the web server is required for a user to be able to access the front page of a website. This is achieved by deploying a web application to a server, so that the server could reply with the correct response when the browser sends a request. Deploying the website is achieved by using amazon web services' elastic beanstalk, which packages a Django application, upload it to the server, and run the specified commands in the server's Linux shell, so an application is actively listening the incoming hypertext transport protocol secure get requests from the browser.

Currently, the website is live at getoffgrounds.com. To build this website, there are multiple requirements. First, a domain name is required, so students can be redirected to the correct IP address, instead of manually the hard-to-remember IP address itself, which is made of four integers between 0 and 255, inclusive. This is achieved by registering a domain name on Google Domains. I use amazon web services' route 53 service to configure the domain name server lookup results.

As a result, the browser of a user could connect to the server. After connection is established, the browser sends a hypertext transportation protocol secure get request, to which the server responds with a reply. This is achieved by rendering a hypertext markup language template, with respect to a cascading style sheet, which specifies the font display and layouts, with data pulled from a postgres database. The python framework for web development, Django, manages all these procedures.

STS Discussion

My STS research topic mostly covers the social effect of our website, a web2.0 platform for users to post and read information. Among other cities in the United States, Zillow (Zillow, 2017) dominates the apartment sell and rent market, and websites like apartment.com (Apartments.com, 2022) or streeteasy.com (StreetEasy, 2022) have their own niche. However, there is not many posts on off ground student housing in Charlottesville. I hope to squeeze in this niche, and hopefully students can have a more pleasant experience for their future off grounds apartment hunts.

A natural question that arises is whether a review platform could alleviate stress of students. I did not find existing research on to what extent a review platform on apartments alleviates stress of students. However, similar research on yelp.com, a review platform for restaurants, shows that a bad Yelp review negatively affects the sales of the platform (Michael Blanding, 2011). The STS discussion of my research would be to figuring out the potential effects on the students and landlords.

Personally, I switched off ground apartments every year in my undergraduate education, and I always procrastinated on signing a lease, because it is a big commitment to make. I hope to know to what extent can the website ease the stress of students when they choose their next year housing.

A natural stakeholder is UVA students who read the reviews on the website to make their decisions on where to live next year. I hope the website can not only inform students with wiser decisions in their off grounds apartment hunt, reduce their stress from the uncertainty of decisions, but also publicly express their comments about their apartments, and receive and express empathy from and to other students through commenting and like/dislike.

Another stakeholder is the landlords in Charlottesville. A critical review may negatively affect their ability to rent their apartments. Multiple complimentary reviews may confirm that their apartment is good.

Research Question and Methods

To What Extent Does Review Platforms Provide Wiser Decisions and Relieve Stress?

I intend to hand out surveys to both students and landlords and ask them the emotional experiences of them from the website. Furthermore, I intend to plug in google analytics to track the number of visitors to the website. If I could demonstrate that there is consistently a high number of visits to my websites, the traffic will show that at least people are interested in the reviews.

Conclusion

The technical deliverable is a website, currently online at getoffgrounds.com, a review platform where students could read and post reviews about their off grounds housing experience, with the intention of relieving students from making stressful decisions about signing a year-long lease, which is a large financial commitment, as well as making more informed decisions about the benefits and shortcomings of the potential leases they may sign. The STS deliverable would be a report on whether the website have the specified benefits to students.

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