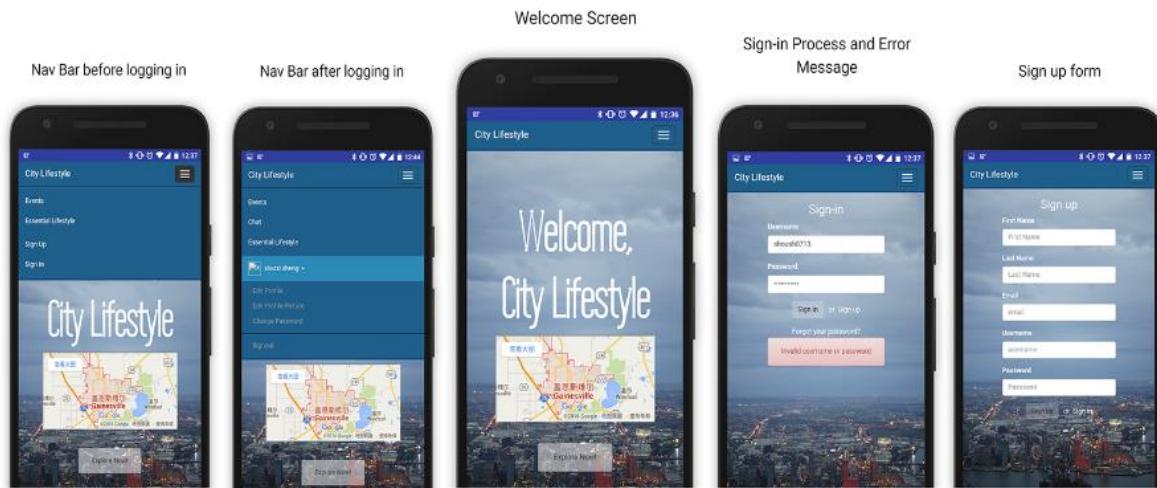


City Lifestyle Design Process



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Nicola Frachesen, Natalie Rumak, Xiaoxi Zheng

Human-Computer Interaction

User Research

Project Description

With this project, we are hoping to create an efficient solution for people to become accustomed to living in a new location by finding events, places to socialize, and everyday locations. As was reinforced by our needfinding process, many new residents find different circumstances like moving, adjusting, and socializing in a novel environment hard. To help alleviate these issues, we plan on designing a system primarily for users who are unfamiliar with their environments, either because they have just moved to a particular city, or are on a extended trip in a new place. In the system we create, we hope to allow users to search for both events and locations that would be of use for socializing in a new area. Examples of these could include concerts, bars, theatres, and coffee shops. Searching for locations of interest will also allow users to find places that will help them feel at home with a new area. This would include places such as gyms, grocery stores, and other everyday locations. With that, we aim to create an app which will facilitate making friends and finding things to do by promoting social events and areas easily found nearby.

Stakeholders

The main stakeholder whom we will be creating this system for is anyone who has recently moved or is planning on moving to a different area in the near future. Although this will be our target audience, there are many potential users who we will need to take into account as well. Other users who will likely find use in our app include people who are travelling for an extended period of time and would like to become more familiar with the area they are visiting, and those who have lived in a place for a while, but who would like to find new things to do or people to meet. Since the features of our app are going to be heavily focused on events, important stakeholders will also include local organizations, event organizers, and venue owners. The people in charge of promoting events and venues will likely wish to have their businesses featured and advertised in as many places as they can, including an application such as ours. As such, one of our goals will be creating a platform to facilitate communication between event organizers and their target audiences. Pragmatically speaking, this will allow venues to put their events on our platform so they can gain additional publicity, and allow users access to even more events. Were we to make a business of this app, we would sometimes allow organizers to create sponsored events, and generate revenue. We believe that creating such a platform would encourage newcomers to explore their environment while simultaneously allowing local organizers to gain increased revenue and recognition.

Research Method - Interviews

The research method we decided to use was the interview, asking potential users about their moving and adjusting experiences. We thought interviewing people was the best method for discovering the information we needed when compared to other possible research methods because it could give us an in depth perspective on the difficulties of moving. It also allowed us

to discover information about the past, which would be much more difficult with other methods. Surveys, another common method, are quite impersonal, making them less effective when asking about an event which can be as impactful to someone's life as moving. Other methods, such as observation, were either more difficult or entirely infeasible to set up given the time and resources we had. As a group, we came up with the general outlines of how we wanted to conduct our interviews, setting up an interviewing guide that consisted of the major questions we wanted to ask our participants. We tried to form questions which would be appropriate and give us a holistic view of our potential users' needs. This question guide served as a useful skeleton for the interview process, and can be found attached to this document in the appendix. Of course, depending on the responses we got from each of our interviewees, we went into in-depth tangents on subjects that were important to them regarding moving and socializing.

After forming these questions, we each interviewed two people individually, meaning we performed a total of six interviews. Below, each of us have recounted what we experienced and learned during these interviews, especially things we weren't expecting or which were very relevant to our application.

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Nicola Frachesen

In the two interviews I conducted, I found that my interviewees had some similar concerns regarding moving, but our conversations veered in very directions. My first interviewee had moved twice in their life, once with their family and once to college, but they found that the most drastic and impactful move for them was the one to college, so that was what we ended up discussing for most of the time. My first interviewee had found getting around quite difficult, and wished there had been more location-based applications to help them find places, providing Waze as a good example and the official UF app as a bad one. Another issue they had involved making friends. They started classes over the summer, but their friends from school would not be starting until fall. They eventually found that the friends they made over the summer were more created out of "necessity" than actual friendship, and they now rarely speak to those friends. Finding people with similar interests is an important thing to be able to do, and is fortunately something which our app seeks to help with. They also stressed to me the importance of being aware of things in a new location before the move, bringing up the important notion that we should be promoting our app to people who are about to move as well. My second interviewee focused on something that I had not thought of previously which was meeting other people new to the city. They said that they were happy to meet people already familiar with the place, but that these people felt more like "mentors" than friends. This could perhaps be something we promote in our app (i.e. an event a lot of new people will be attending). They also stated that they did not feel entirely happy with their new location until they had moved in with roommates who were their friends. This bolsters the idea that finding long-term friends is of great importance. Undoubtedly, I learned a great deal from the people I interviewed.

Natalie Rumak

The two people that I interviewed both became comfortable with their new environment very quickly. One of the major changes that the two faced was moving away from family and living on their own. One interviewee mentioned that this change only made his diet suffer.

However, the other participant moved much further away from home (between states) and took a bit longer to feel comfortable in his new environment than the first interviewee. He also only knew one person in the new location, so he did not have the comfort of friends moving with him. He had to become used to these new locations, navigating to the places, and figuring out a completely new routine. However, one of the positive changes he found is that the new location had more people around his age and with his interests. He began interacting with people by talking to them online before meeting them at an event sponsored by UF. A similar interest in gaming made it easier to talk to the new people. He also mentioned that talking to the people online before meeting in person made him more comfortable attending the event. On the other hand, the first interviewee had friends that also moved to the same location at the same time. He also had toured the location before moving, so he already felt familiar with his new environment. These factors contributed to making him feel comfortable with the new environment almost immediately after moving. The new friends that this participant made were also during events with university clubs. When asked what advice the two participants would give to people moving to a new location they said that meeting and talking to new people immediately is the best thing to do. They both had difficulty starting to meet people, whether it was nerves or not knowing where to go to find them, but agreed that they wish they started earlier. Finding new friends contributed to their feeling at home with a new location. One participant also found that if he explored more of the location he would feel more attached and at home with the new environment, but did not know how to find new locations to explore. Our application hopes to have features that will help others moving with these two problems and make them feel more at home after moving.

Xiaoxi Zheng

The conversation with my first interviewee revolved heavily around adjusting to new school environments and adapting to living alone for the first time. She mentioned her moving experience went well with help of her parents, and it as an exciting chapter of her life. Since this is the first time she moved out of the comfort of home, she mentioned she spend extra efforts in making new friends, exposing herself into events, and organizations. Upon arrival to Gainesville, she downloaded several apps to help her adjust and getting around the new environment. The apps that she mentioned includes University of Florida App, UF Off campus website, RTS Bus Route App, myUFL, isis.ufl.edu, Canvas, and Yelp. Outside from the traditional student life, she relies on Yelp to give feedback on local restaurants and shops. She mentioned she wished she had known how to budget, and how to plan for groceries. This specific answer triggered a discussion between my group for potential app focus. Standing as graduating senior, I asked her to plan out what new or additional tools she'd imagine herself using after graduation. Additional apps and services she mentioned are Waze (navigation app), Google Map, Governmental Websites (for mailing address changes, change of license(s), and tax policies), Apartment finding, real estate finding apps and websites, Mint App (Budgeting for personal finances), Craigslist, and Groupon. By asking follow up questions, I uncovered several additional needs that gear the focus away from typical college students. Finally, When I asked how she would find events and new things to do, she commented that she relies heavily on Facebook events, and word of mouth from friends and online services..

My second interviewee was my old roommate who had just recently graduated from UF in the Spring of 2015. After graduation, she accepted an offer from a company in New York. She spoke about some differences in moving experiences. In her most recent move from Florida to New York, she used professional movers that shifted the majority of her assets. She commented that the hardest part of the move was making new friends and forming new social circles. When asked what services she used to meet and make new friends, she listed a couple mobile apps including MeetUp, Eventbrite, Facebook, and Googling specific interest keywords. Apps listed by interview participants will be taken into consideration when we start designing and prototyping for our app. She also commented that the amount of time it took her to shop for the “perfect” apartment was out of her expectations. New York has very specific laws on housing situations and is known to have black markets for illegal residential conditions. When asked about her living situations, she said she had the luxury to live with family temporarily before she had to commit to a “perfect” apartment that was within her budget and ideal proximity of work. This comment also triggered some thoughts on what the focus of our app would be.

In conclusion, I’ve gotten exposed to several user needs that were outside of our initial design focus. It seems that new residents of a new environment find their comfort after they established a social circle, a place to live, and routine in daily life.

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As per our expectations, interviewees commented largely on challenges we were expecting, and all of them recognized the difficulty in socializing in a new place. However, they did inform me about some unexpected issues they had while moving, and we will be sure to keep all of the information they provided us in mind while moving forward.

Design Requirements

We aim to create a mobile solution to the problem we are solving, and will likely be developing our system as an Android application. We feel our app is best suited for mobile, as it is an easy place for any user to quickly get the information they need. This will come into consideration when creating the application design, especially for navigation. Since it is an application that may be used while moving, it needs to be designed in a way that allows users to easily access parts of the app. Were we to make this a computer application, it wouldn't be possible for users to access it while out exploring their new city, something that is necessary for the app to succeed. The reason we are planning on developing for android is because all of our group members have a good deal of experience in Java development. Ideally, if we had more time, our system could also support versions on iOS and the internet. We have identified several features to work on when developing this app. Please refer to the features listed by importance below:

Definitions:

Residents : Newcomers and local residents who would like to use the app

Venues: Any organization who would like to feature their locations or events on the app

Users: Anyone classified under residents and venues.

Locations of Interest (LOI): places that are part of routines of living in a location.
 (grocery store, gym, best restaurants, etc.)

Must Have	Should Have	Could Have (V2 Features)
<ul style="list-style-type: none"> - Basic authentication of all users. (i.e. signing in) - differentiate authentication of venues from residents - show interests, favorited events, attended events, etc. - browse based on type of event - view events based on interests - venues can create and delete events - venues can add locations of events - show a list of events users plan to attend and have attended - user profile 	<ul style="list-style-type: none"> -View user profiles, for those who have granted permission to have their profiles made public -View user profiles of people that attended same events -View user profiles that favorited the same events or interests - sort by most popular events - sending and receiving messages between residents that will be attending or attended the same event. 	<ul style="list-style-type: none"> - Social media integrations - browse through places based on type (LOI) - sort by most useful place for new residents (LOI) - rate places for usefulness (LOI) - favorite places for quick access (LOI) - sending and receiving messages between venues and residents. - Allowing users to accept messages from anyone.

To summarize the above chart, we would like to create a platform in which users new to a location can easily find things to do, while the people who host these events can easily display their events for anyone who may be interested.

Research Papers

Below are the research papers each of us analyzed. We attempted to find papers which were pertinent to our technological needs, as well as some that were more focused on the main issue our app attempts to help with, the difficulties of moving to a new place. An IEEE-styled bibliography of the papers we analyzed can be found in the appendix

Nicola Frachesen

Paper #1: “Psychiatric Implications of Displacement: Contributions from the Psychology of Place”

This paper describes psychological issues which can result from people moving to a new place. Fullilove first describes who is most vulnerable to the negative effects of relocation, and these issues are shown to be especially pertinent to residents of the United States, who move far more often on average than people from other countries. Following this, in an attempt to define what a “place” is to people, Fullilove takes a look at past psychological research and presents the holistic idea that place is “the sum of resources and human relationships in a given location.” This definition is especially pertinent to the application we are trying to build, as we are seeking

to help people find places to go in order to meet new people, addressing both parts of what a person will want to have in a place. The paper goes on to discuss why people feel disoriented when moving, believing that people feel less at ease due to no longer having the “lay of the land.” It is also vital, Fullilove posits, that people not feel alienated by the new place they are in, reminding us that we ought to focus on creating a welcoming environment. The final topic presented in this paper is an attempt to help solve moving issues with the concept of “empowered collaboration.” This process seeks to have people acclimate to a new location by having people, both new and familiar with the place, working together. This can greatly aid the emotional needs of the people involved, and is very similar in concept to the plans we have for increased socialization in our application. Thus, this paper from a highly psychological viewpoint emphasizes on many subjects we knew we were going to handle, but also helps keep us grounded to what we should be focusing on.

Paper #2: “Mobile Awareness and Participation in Community-Oriented Activities”

The researchers who worked on this paper were seeking to enhance community life using web and mobile applications. To accomplish this, the researchers created an application which allowed users to search for events in their area. Their first prototype was created in a “wiki” framework, but they eventually created a more in-depth, mobile-centric application. Their application allowed users to search by event category, keyword, date, and location, all of which are features which we would like to implement in our application given time. They also allowed users to anonymously comment on events, and, in their second field trial, a photo sharing feature, two controversial features we would consider implementing as well. They tested their application twice, with participants who were going to a new year’s eve party in 2008/2009 and 2009/2010. Their results provided interesting information including the fact that only 36% of users used the web app on computers, with the rest using mobile devices, supporting our own mobile-centric ideas. In discussing their results, they found that their strength was in allowing users to find out what events were going on and where, two things we would like to focus on as well. They also found it important to allow people to have easy access to events that had already started instead of putting them in an older events category, as users became frustrated at not being able to see ongoing events, something to keep in mind. Finally, they found that people generally preferred posting photos to comments. Thus, this paper is a useful guide for looking at how others have implemented a somewhat similar app, and what the good and bad aspects of that were.

Natalie Rumak

Paper #1: “A gamified mobile application for engaging new students at university orientation”

This article discusses adding game elements into an otherwise non-game application. The application that was used to test this idea was one that was meant to introduce new college students to the campus, resources, and new social groups. The authors of the article wanted to add game elements to this application because of its ability to add motivation to using it, especially because they had trouble getting new students to use the original application. The authors stated that from previous surveys and interviews they discovered that during “the first few weeks of university new students can often feel lost, have trouble meeting new friends and know what services and events are available.” This is relevant to our application because university students are often new to the city and often face same problems that others new to a

city face. The features created in the application made by the authors includes goals that encourage exploring, event scheduler, contacts page, and a map. They also had challenges that added game elements to the application. This encouraged the users to test the application, explore their surroundings and socialize. The results of the study found that many users found the application helped them begin exploring and socializing as well as having a fun time using it. One improvement that was suggested was to have more challenges associated with locations. This research is important to consider when creating our application because it shows that we may need a way to add interest to the process of using it. A feature that will encourage continued use and rewards for that will help bring interest to our application.

Paper #2: “An innovative mobile electronic tourist guide application”

This paper focuses on the idea of mobile tourism, defined as a trend seen recently of phones being used as tour guides. It also attempts to create an application of content for tours based on user preferences input when first signing up. This is significant for our purposes because we hope to have the feature of personalizing searches and events based on preferences. The application also uses this system while not requiring internet at all times. It accesses the necessary information while connected to internet at home or while connected to a PC, but then can operate without data afterwards. This allows for the application to be more portable, as it can be used in any situation. It also means that it will be more reliable to use because the necessary information will be held within the app. This is important to consider when we will be creating our own application because we hope to have it be as portable as possible. It will also be helping people new to a city, who may get lost if the application fails at any point. Another important feature that was discussed in this paper was the design of the interface to be kept simple and short “so that interaction with the application requires minimal effort and does not distract the user’s attention from other activities (walking, talking, etc.).” After participants reviewed the application, they suggested including GPS, reviews, and emergency contacts in the map. These are features that our application could also make use of and build upon. Overall, this paper has brought features to our attention including the reliability of internet connections, GPS use, and reviews.

Xiaoxi Zheng

Paper #1: “Enhancing Community Awareness of and Participation in Local Heritage with a Mobile Application”

This paper describes an interesting goal for local communities to create and reinforce community identity by connecting residents to their local heritage. It is described that, “technologies have enabled and facilitated the creation and consumption of digitized history content provided by official history institutions as well as individuals”. To target this goal, this paper investigated how people perceive, experience, and interact with community content that is socially generated and tied to locations, particularly with respect to building community heritage through conducting empirical research. A mobile application called Lost State College (LSC) was developed and the researchers conducted a user study with 34 local residents. Of all the social features offered in the app, “several participants indicated that seeing a list of people who are somehow connected to himself/herself would be interesting”. The key findings to this study is that it indicate meaningful historic places evokes special attention from the participants, and

that those who have lived in the community longer tended to contribute more to the community heritage effort. Researchers were able to track engagement through in-app features like, performing virtual Visits, indicating Likes, leaving Comments and adding Photos. Participants utilized social features as a way of learning local history, reflecting personal experiences and stories, and co-creating rich layers of local history information from their perspectives. It was observed that social interaction increased with the use of mobile tour application.

Paper #2: “Adjusting Behavior to Changing Environmental Demands with Development”

This paper focuses on the brain plasticity to provide the capacity to adapt and optimize behavior in accordance with the current environmental demands. Instead of focusing on behavior psychology, this paper emphasizes on the biological and evolutionary purpose of the capability to learn through experience to obtain reward or to avoid danger. One important point to note from this paper is the fact that “One of the essential aspects of plasticity is the capacity to adapt to changing environmental demands over time. Evolution has shaped the brain to successfully deal with the physical and social demands of the world. As these demands change with transitions through [different stages of life] corresponding adjustments in behavior are required.” This paper has highlighted several design decisions in which we need to put into consideration. Depending on who our primary users are, and how they correspond to adjustments, we’d have to consider their corresponding adjustments to the changing environmental demands. As our app aims to reduce the stress required for environmental transition, we will try to guide user behaviors to the unpredictable new environment.

Appendix

Interview Questions

Though each of the interviews went differently, as is prone to happening, we tried to use similar questions in each of our six interviews. Here are some common questions we asked over the course of our sessions:

- How many times have you moved to a new city in your life?
- The first time you moved to a new city, how did you think it went?
- If you have moved more than once, how were subsequent moves different from the first?
- What was it like getting your bearings to your surroundings in a new place after a move?
- What tools or services did you use to help you get acclimated once you had moved? What did you think of them?
- What tools or services did you wish you had to help you once you moved?
- Have you experienced any major positive effects or faced any challenges due to having moved and what were they?
- What were things you wish you had known during or after a move that you did not?
- In your moving experiences, have people like friends or family moved to the same place with you? How did this affect the experience?
- What are the ways in which you typically look for events you wish to attend (or things to do in general)?
- After a move, how did finding events you wanted to attend go for you? How did you go about finding them? What resources did you use?
- How did you feel about socializing after a move? Did the amount you socialize change?
- How do you typically meet new people?
- What have your experiences of meeting new people and making new friends after a move been like?
- At what point did you feel comfortable around your new environment? What are the factors contributing to that?
- Do you have any advice you'd like to give to someone moving in the future?

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Nicola Frachesen

Natalie Rumak

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Human-Computer Interaction

Ideation and Wizard of Oz Prototype

Brainstorming and Affinity Diagramming Process

Meeting up as a team for the ideation process went quite smoothly overall. We believe that we have managed to hone in on the concepts which are both good for our planned application and within the scope of this class.

Taking the ideas that we discussed in project 2 and further developing them during our brainstorming session allowed us to discover new ways to encourage interactivity, engagement in our app, and security. Though not all of them are possible to implement for the scope of this class, it gave us a basis for discussing designs of our application so that it would be possible to include many of these new ideas as well as the ones we had listed for project 2. We discussed the navigation between pages of our app and how we would unify each of them including the use of similar color palettes, layouts and terminology throughout the app. Other topics we discussed regarding design includes how we would differentiate between users and venue signing up and logging in, what information would be visible when searching through events, using maps to better illustrate locations of events, and many more. They are all discussed further down and our 3 sketches illustrate some of the ideas we came up with.

The affinity diagram we created took our brainstorming ideas and put them into defined categories. We first decided to separate the affinity diagram into three major parts: will have features, might have features, and designs. Will have features are things that, extenuating circumstances aside, we will be able to implement for our application. Might have features, on the other hand, are more like stretch goals, including things we might try to do, anything we don't think we will be able to do, and any of the really crazy ideas we had that definitely won't be feasible. Designs are different ways we might want to have the app look, dictating how users would interact with it. We further grouped together ideas in each of these three sections. The Will Have and Might Have sections of our affinity diagram can be found in the appendix of this paper.

The four major Will Have sections we created were Log In, Events, Essential Lifestyle Locations, and Chat. Log In includes the main features we'll need for allowing people to create accounts. Typical users of the app will be able to create an account in which they can enter their real name and/or a username, so that they can keep their privacy if they wish. They will also be able to provide their interests (so that the app can match them with appropriate events), what city they live in, and whether or not they are new to the city (so that they can be matched with events appropriate for newcomers). Venues (locations where events take place) will also be able to create their own accounts which are different from the typical user, allowing them to create and

delete events. Venues have to be approved by us (the app's developers) before being allowed to create an account. The next section involves perhaps the most central feature of our app, events. Events are things going on in the area that venues have posted. There are a number of tags which can be placed on events including what interests the event aligns with, whether it's good for someone new to a city, whether it's unique to the area or a part of the local culture, and what age groups the event is good for. Users can sort events by using any of these tags, so they can get just what they are looking for. Another Will Have section is Essential Lifestyle Locations. This will be for any places people will commonly need to have access to where they live, including grocery stores, gas stations, government facilities, etc. These locations can also include places which are unique to the area or important to the local culture. The final Will Have section is a Chat feature. We will implement a page which allows people in the same city to chat with one another. This page will display people's usernames, allowing them to chat as anonymously as they'd like about any of the events going on nearby or, for people who are new to the city, any questions they might have about the area. This will allow people to connect with others and figure things out in their new place even better if they are confused. Thus, these are the four main things we would like to include in our application, but they were not the only possible ideas we had.

We also came up with a number of features we might want to have, but which will likely be outside of the scope of this project. Ideally, our application could have several APIs integrated into it, including Google Maps, so that the app can check for events near the user's current location, and social media, so that the user can make posts about the events they're attending. It could also be advantageous to implement a Yik-Yak-like "Home Location" and "Visiting Location," so that you can be provided with events of cities you are visiting while on vacation, while not losing track of what you've done in your own city. Another major idea we had was implementing QR codes for verification and increased engagement. In order to verify that someone went to an event, they could scan a QR code located there. Scanning would also earn them points, which they could redeem for prizes either in the app, or from the venues they have visited frequently. As users are verified at more and more events, they would also earn more recognition in the app, with their profile showing how active they've been. Our app will probably just end up displaying people's usernames, but we could also implement privacy setting which allow users to alter this and other things involving what information (e.g. real name, picture, events attended, etc.) users share with others. Ideally, we would also like to display more in-depth information about events, including times, if it is currently going on, who else is attending, directions to the venue, etc. A final stretch goal we've considered is having users be able to connect with each other by using Snapchat-like scanning of personal QR codes, so that people can add each other as friends when in person. Though we probably won't be able to implement these extra features, it was good to sit down and talk about them, so that we could further consider what people might want from an application such as ours.

The final subject we brainstormed involved the different ways our application could be designed and interacted with. This mostly involved sketches and talking through the different ways people would want to use the app. Three of the better design ideas have been sketched out and can be found later on in this paper. This discussion also allowed us to finalize what platform we want our app to appear on. Considering both usability issues and how difficult or not implementation would be, we decided to create a mobile-centric website in which we implement

a website which can be accessible from computers, but also can be “wrapped” into an android application. That means that people can download our project as an android application, but also access it on their computers. This allows us to focus on providing a good mobile experience, as our research showed that most people would want to use this app on their phone, but also provide a website experience for those who would want it. It also helps with portability because the application is something that will likely be used on the go, as per the user research we performed.

This affinity diagram of features and designs fits very well with the design requirements we came up with in project 2. All of the major features we wanted to have are accounted for, and we even came up with several new ideas which would appeal to users based on our research, including QR codes and further interactivity. The way users will interact with our application, primarily as a mobile android application, but also in the form of a website for those who need it, even goes above and beyond what we stated in our design requirements. As such, we believe we have a solid foundation for continuing to develop our application.

Design Sketches

Below are three different sketches we considered for the design of our application. Sketches from our brainstorming session were converted to digital drawings to show a cleaner concept.

Our first sketch shows a possible android app that would bring you to a login page once it was opened. A link at the bottom could be used to register as a user or venue for our app. Pressing the sign up button would bring the user to a page with input boxes for relevant information for both venues and general users. At the end of this input, the user will be asked to choose if they will be a “user” or a “venue” and depending on their choice will be directed to fill out the rest of the information necessary based on their choice. The appearance of the sign up page will match what is drawn for the login, where there is a title and input box and button to submit will be right aligned.

Once the user logs in, they are brought to the home page where events and lifestyle locations are recommended based on the preferences input on the signup page as well as events and locations already visited. At the top of this page is a section dedicated to all upcoming events that the user has marked as “attending”. The top navigation bar will bring the user to different pages including their profile, events, lifestyle locations, and search page. The events and locations pages will appear similar, but are divided because they have a different purpose within our application. Clicking on any of the listed items will open a more descriptive page for that specific event or location, where the user can mark themselves as attending as well. The search page will have trending events and locations at the top. They will be color coded to differentiate between the two types, for example blue for events and green for lifestyle. Before searching, the trending items for all tags will be at the top, which will allow for exploration. Finally, the profile page allows for the user to edit information about themselves, privacy settings, and profile pictures.

Sketch #1

Android APP

Welcome!

username:

password:

sign up log in

link
will move you
to home

Events

name date location tags ↓
" " "

" " "

events based
on likes/
interests

Lifestyle Locations

name description... location tags ↓
" " "
" " "

lifestyle list
based on likes

Upcoming events:

you may like:

recommendations
based on
prev. & likes

trending:

trending events
& locations
based on prev.

edit

name
 location

privacy
 show name

check marks
for settings

Our next sketch shows possible variations of the process described above. Here we have a new way to sign up where there are two tabs at the top that will allow people to decide which type of sign up process they want from the start. This may allow for the user to have a better idea of what each type of sign up is for. Adding a short description at the top of each tab explaining what they mean can help clarify the application. For example, “sign up as user to find new events and lifestyle” and “sign up as a venue to create events.” If the person signs up for a venue position, then they will be required to show proof that they are actually a part of the venue staff or management. Once they finish signing up, an email will be sent back to us and we will confirm and accept venues. This is to add a level of security for the users that will be attending events. The rest of the sketches on this page show the pages that can be accessed whether the user is logged in or not. This allows the users control and allows them to access the important information that may be presented in our application without needing to spend time logging in. The purpose of logging in will be to further participate, save information, and personalize their experience with the application.

Events and lifestyle locations pages will first have categories that will refine what types of things will show. Categorizing them like this will allow for easy access to specific things that the user will be interested in. Adding a category for all possible tags will allow the user to explore. Once a category is chosen, the most viewed events or locations will appear at the top in a list format. There will be a small map preview showing where the location of the item is for each block. Important information will be shown as a preview for each item. Clicking on the map will bring up a full view as shown in the last panel. On the map there will be tags for your location, the event location that you chose, and other events nearby. The event and your location will be much larger and prominent so that they can be easily located. The smaller events nearby will allow further exploration.

Sketch #2

sign up

User	Venue
username	
password	
confirm	

↓ Scroll for more

sign up

User	Venue
name of venue	
email	
proof of registry	+ []

↗ Need to confirm venue identity



categories for events

Sports

map	name date info
map	" "
map	" "

inside categories

Lifestyle

map	map
map	
map	

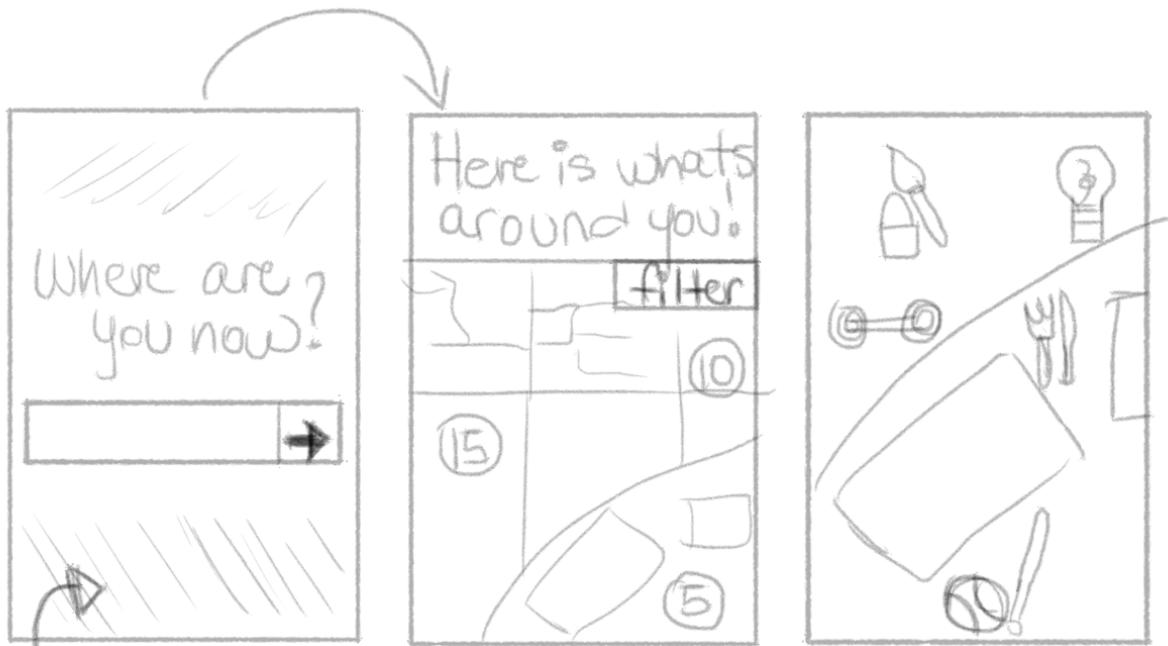
categories for locations



Finally, in the last sketch, we have a different style of an application, where you open it and simply input your location to find new events and lifestyle locations. Once you input this information, using zip code or address, a map will appear with numbers in circles on it. This map shows how many things can be done around a larger area and the numbers tell the user how many things there are in that smaller area. Selecting a number will zoom into that area and will show a map with icons that describe the type of events and locations are found there. If icons are too distracting, then pins can also be used. Selecting one of the icons or pics will bring up the event name at the top and information about it below. Buttons right below the map allow for interaction as well as a button found by scrolling further down. A chat can be accessed that allows users to communicate with the other users that have pressed the attend button. This application is designed to work with a social media connection as a user sign in.

This sketch presents a system which is very straightforward for people to use. It allows people to find events quickly, without having to navigate through the app at all. This deals with an issue we found that people had during our research, as they stated that apps were often too convoluted. Since it features a good deal of location-based features, however, this approach might not be something we can accomplish within the scope of our project, but we should certainly keep the ease-of-use present in this sketch in mind when we are developing in the future.

Sketch #3



city picture
behind.

icons
when you
zoom



When you
click icon

Storyboard



In our storyboard, based primarily on our first sketch, we depict scenarios that the application will be used in. The first three panels show how the app can be used to make a person feel at home when they move to a new location. The second row of panels shows how the app can help users feel connected to others that live close to them and make friends. These 6 panels illustrate major factors that our interviewees claimed to make them feel like they felt comfortable in a new location. The next row shows how the application is portable and can be used in different locations that you travel to. It also will allow users to check back on their “home location” so that they never lose touch with their permanent home. Finally, the last panels show how the app gets its events that users interact with. Businesses decide to create events and will be advertised inside of our application.

Wizard of Oz Prototype

The Wizard of Oz prototype we have created is less a prototype than it is the result of a quick first sprint, as we already have several major elements of our application coded and functional. In order to most efficiently develop an application with all of the features we might want in it, we have decided to use the MEAN stack for web applications. This provides a strong framework and powerful features for us to develop our application. As our app is focused on mobile users, the web app we have created has been wrapped into an android mobile application, meaning that people could download and use our application on android devices. We already have this up and running and have ensured it works on our android devices. As we are using a web application base, however, it can easily be accessed online from any computer or mobile phone as well. (It can be found at citylifestyle.herokuapp.com) Please note that we will be working on this application in the coming weeks, and so the appearance and features you find on this site may grow and change compared to what we have described here depending on when you access it.

We have implemented much of the basic structure of each of the four Will Have features outlined in our affinity diagram. User accounts can be created, allowing people to quickly and easily create an account which gives them access to the site’s features. A part of this feature which we do not yet have, but which we are currently in the process of properly implementing, is the account system for venues. Next, a system for viewing different events has been implemented, but we do not yet have a system for tagging or sorting these events. Similarly, users can also view essential lifestyle locations, but they too do not yet have tags. A basic chat system has also been implemented, allowing users who enter the chatroom at the same time to communicate. Finally, as a bonus, we were able to figure out basic Google Maps integration, as we have your current city (for now, just Gainesville) show up on the main page of the website.

As we did our best to do a lot of actual implementation for this project, the role of the wizard is very minor and passive. Since we have not yet created the separate account system for venues, we, the wizards, had to manually code events into the system. That is the only thing the wizard has to do and, as such, the wizard does not have to actively manipulate the application while someone is using it.

Thus, we feel that this prototype is very advanced, and that we have a strong base to polish and add to moving forward

Appendix

Brainstorming Ideas/Affinity Diagram

Will Have Features

- Login
 - Sign Up
 - For users
 - Name, username, privacy setting, interests, Home location, new to the city
 - For Venue
 - Business Name, address
 - Allowed to add or delete events
 - Must be approved by us
- Events
 - Can be tagged by interests
 - Can be tagged that it's good for new people
 - Can be tagged as unique to the area
 - Can be tagged as part of the culture
 - Can be tagged as being for a certain age group
 - Events can be sorted by the above tags
 - Ability to favorite event
- Essential Lifestyle locations
 - Can be tagged as unique to the area
 - Can be tagged as part of the culture
 - Grocery stores
 - Post offices
 - Restaurants
 - Movies
 - Theaters
 - Gym
 - Gas station
 - Schools
 - Parks/Playgrounds

- Clubs and Bars
 - Government facilities
- Chat
 - Allow users in the same area to chat with each other.

Might Have Features

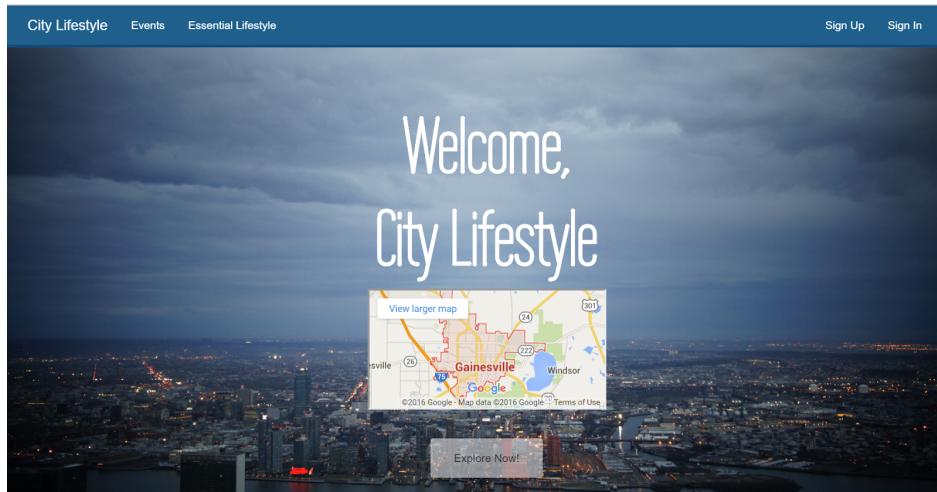
- Google Map Integration
 - Event location tagging
- Social Media Integration (facebook, twitter, etc.)
- Visiting setting
 - Similar to Yik Yak “Home Location” vs. “Visitor Location”
- QR codes at events
 - Event verification for our app
 - Increase engagement
 - Allow for (reward) point system
 - Eventually they can purchase sponsored items
- Verification system for users
 - Have specific event that can verify users via QR code
 - Validate users
 - Have a unique icon
 - Earn cute icons based on the number of events attended.
 - For example: @ 100 events - giraffe, @ 200 events - Panda
- Privacy settings
 - Be able to choose between showing profile pic or not
 - Be able to choose to show real name or username
 - Be able to choose if your name shows up under event attendees.
 - Choose what information is shared with your QR code
- Under events:
 - Show Description of event, time, location, and host
 - Show who is going base on privacy settings.
- Connecting with people
 - Collect contacts based on QR codes of others users
 - Users have a personal code
 - User can set what information is shared



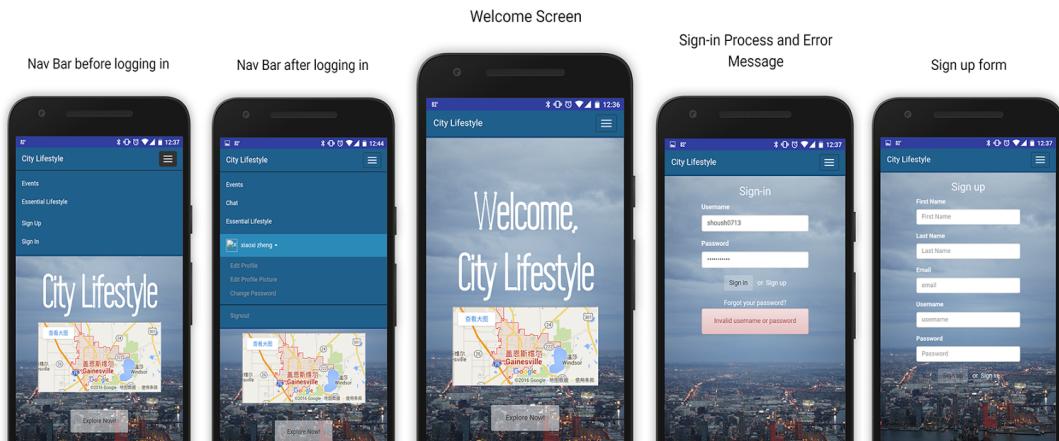
Nicola Frachesen
Natalie Rumak
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HCI - Implementation and Heuristic Evaluation

Prototype Implementation

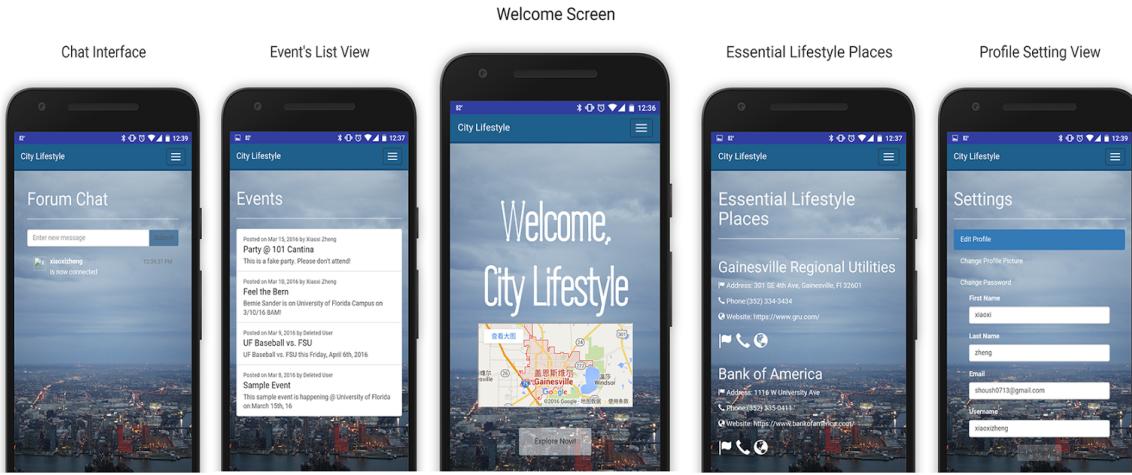


Our application, City Lifestyle, is an android and web application which allows people to find events to attend and places to go in their city. It focuses on providing this service to people who have either just moved to the city in which they live, or anyone who just wants to know more about the things going on around them. We developed our application using the MEAN.js web application stack, designing it with a focus on mobile users, as many of our interviewees stated that they would use such an application far more on mobile devices. As such, it is available as a downloadable android application or as a website available to both mobile and computer users alike. The app was developed using the Android development application WebView, in which it displays the deployed website inside an AndroidManifest View. Above is an example of what the page looks like on a computer, and below are images from an android device.



Features:

Over the course of these projects, we have managed to implement a number of the features we outlined in our design requirements, even managing to get a few features in that we weren't sure we'd be able to. Here, you will find details on the implemented features and some attached screenshots.



- Accounts
 - Sign Up
 - For users
 - Name, username, privacy setting, interests, Home location, new to the city
 - For venues
 - Business Name
 - Allowed to add or delete events. Must be approved by us.
- Events
 - Sorted by Date posted
 - Events have titles and descriptions
- Essential Lifestyle Places
 - Examples of places include stores, government facilities, theatres, parks, etc.
- Forum Chat
 - Allow users in the same area to chat with each other.
- Google Maps Integration
 - Your current city, in this case Gainesville, is displayed on the homepage.

Though we were initially planning on including the ability to tag events and locations, this proved to be too complex a system to implement with the time we had. Tagging is certainly an important feature that we would like to implement in the future, but it is not so vitally important for the moment that it negatively impacts our application.

Thus, with our application, users can find out about events and important locations in their area, and even chat with others nearby. Though we attempted to design this application to

be as easy to use and provide the most important features to our users, it is still vitally important that we perform further analysis of it through heuristic evaluations and testing.

Heuristic Evaluation

After completion of development, we took some time, both individually and as a group, to look over the application we created to see if it had any issues. Keeping in mind the heuristics put forth by Nielsen in addition to our own thoughts on design, we performed a heuristic analysis on City Lifestyle and have listed the main insights that process gave us below.

Issues Found

Issue: Event Changes

Heuristic: Visibility of System Status

Severity: 2

As of now, we have not implemented a way of letting users know when there has been a change to events. This might be frustrating for users if an event they are planning to go to gets cancelled or has a change in location or time without them knowing. Ideally, we would want a notification system which would allow people to know when an event they wish to attend has been altered (e.g. the scheduled time has changed). It could additionally be useful for users to know when a new event has been created near them that they might be interested in, and such a notification system could help remedy that as well. Thus, our current lack of a notification system is not a crippling issue, but it would be very helpful for most users, and it would most definitely be a priority to implement in a more fully-fleshed out version of this application.

Issue: Password Creation Difficulty

Heuristic: Error Prevention

Severity: 2

Our application provides a number of error warnings in appropriate places when things go wrong. For example, we have the conventional “Invalid username or password” prompt pop up when a user fails to log in, along with the ability to have someone reset their password. However, not all of our error messages are appropriately fleshed out. When being asked to create a password, we set up a password strength bar which must be filled to 100% before the password is accepted. Unfortunately, we have not yet implemented a proper pop up which tells users what sorts of things they have to do to make the password stronger, and they have to keep on adding stuff until they have put everything the system wants. Though not a huge issue, it would be very bad for a user to try to create an account only to become so frustrated with the password system that they decide to leave.

Issue: Lack of Documentation**Heuristic: Help and Documentation****Severity: 1**

At the moment we do not have any documentation for either users or venues to access if they have questions about our site or if they have any issues. Though not the most important thing to have as long as the design of the rest of the application is good enough, it is still something we should have available just in case.

Issue: Background Image and Text**Heuristic: Aesthetic and Minimalist Design****Severity: 1**

In several places in our application, foreground text is displayed directly on top of our fancy city skyline background image. Using an image that has varying shades of color and value as the background of our application makes some of the text harder to read at times. Scrolling means that the lighter text may move up to the lighter section of the image. Though not unreadable, it may take a moment to realize what it says when scrolling through the page. Thus, in future revisions of this application, placing something in between the text and the background image may make it more pleasant for users to read and look at.

Issue: Inconsistency Between Pages**Heuristic: Consistency and Standards****Severity : 1**

Though there is a consistency within each page design, as a whole the application has a few inconsistencies. One that is especially significant is the difference between the events tab and the essential lifestyle tab. Though the information necessary for each item on the pages is similar, the format that the events are presented in is very different from the essential lifestyle items. This was initially done to differentiate between the two types of items that we were sharing, however there could be small additions to each page to help unify the application as a whole.

Potential Improvements**Notification System**

As mentioned previously, our application has no way of letting people know that an event that they are planning on attending has changed, which could turn to be very problematic for users if an event's time or location changes without their knowledge. Additionally, we don't

currently have a way of letting users know about new events that will be going on near them. Both of these issues could be solved by creating a notifications system which would allow users to select various things to be notified about, including changes to events, new events, and other updates to the system.

Password Information

Currently, our application requires you to create a complex enough password (e.g. long enough, with different characters, etc.), but we currently have no way of showing the user exactly what it is they have to do. We have a progress bar showing how many things they have done to achieve a proper password, but we should also create a specific list of what it is the user has to do when creating their password which is either permanently on the sign up screen or pops up when someone is typing a password.

Answering Possible Questions

Currently we do not have a system in which we can offer additional help when users run into an error or another specific problem. This could be remedied by creating documentation on how to use our interface and provide a live chatting/email support on the site if necessary. Certainly, we should focus on having the system be easily usable from the outset, but even the best systems have helpful tools such as FAQs and user support there just in case people find it necessary. In further implementations, a FAQ page could be created with questions and answers that we think would help users and venues with using our application. Within this page we would have a contact form or email address with instructions so that the users can contact us with new questions or for any other help, which will allow us to keep the FAQ section updated and current.

Text Background

On the Events page of our app, there are white text boxes which hold the information about individual events, however the rest of our application does not use these text boxes, instead often placing text directly on the background. Were this text box style from the events page to be replicated in other parts of the app, it could help make things more easily readable and visually pleasing to users.

Consistency

Events and Essential Lifestyle pages of our application need to show similar information, but still need to be presented differently to show the user that they have different purposes to the application. To unify the two tabs, we could include the icons that were on the lifestyle tab in the events tab. Another thing that would help unify the tabs is to make the essential lifestyle items within text boxes the same way that they are in the events tab. This would also help with the text problem that we experienced described above.

These were the issues we managed to find and the improvements we managed to come up with during our heuristic evaluation process. As expected from what is essentially a first draft of an application, there were a few issues, but fortunately we managed to develop possible solutions for them with relative ease. Keeping these issues and solutions in mind will certainly help us when testing the app, so that we can learn both from how we criticized ourselves and from what others think of our work.

Appendix

Notes from Heuristic Evaluation

For our heuristic evaluation, we just jotted down a number of notes here as they came to mind. After that, we fully fleshed some of them out for the proper submission above.

- front page can scroll slightly even though it doesn't need it
- fits minimalist design generally well, but the screen can feel a bit cluttered with the background image
- password too difficult to come up with
- should have password requirements stated somewhere
- "Essential Lifestyle Places" is perhaps to weird a name
- some of the text shows up on the background image
- users should be notified of changes to events
- there is a degree of inconsistency among the pages' designs
- should all of the text be in text boxes?
- there should be some sort of documentation for users who run into problems
- clarify text in chat to let you know who else can be in there with you
- make an FAQ?
- consider changing icons in lifestyle locations

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Study Design and Pilot

Population

The population that will participate in our study is people that are new to a city. We need to have these types of people in our study so that we can gauge how successful our application is in the scenario that the participants are not familiar with their new home. The purpose of our app is to help this population become familiar with their new location, so they are the most valuable for our study. Others that may be valuable includes people that have lived in a location for a while and want to still become more familiar with their surroundings. Having some participants like this will allow us to test if the application will be successful in other situations. However, we would exclude anyone under 18 years old because our target audience is for young adults or older. People under the age of 18 will be looking for different events than older populations and allowing them to attend events with adults might not be a good idea in certain situations, such as when activities at bars or clubs are involved.

Hypotheses

We created two hypotheses for the purpose of our study, listed below.

1. After using our application, people feel they know more about relevant events and locations around them.
2. People will have a pleasant experience using our application.

Study Conditions

For the purpose of this study, we will be using one group of participants that will be sorted by time living in the new location. Ideally, we would seek to have 5 participants for each of these time frames: 1 month, 2-6 months, 7-12 months, 1- 3 years, and 3+ years. This would give us a range of times that will give insight into when our application is most useful and which parts of it are used during certain times.

Participant Procedure

During the study, participants will be asked to go through a series of tasks. First they will be asked to sign up on our application. Then we will ask the participant to navigate to different parts of the application by asking them to find an event that they would like to attend, find contact info for an important location in their area, and to chat with someone on our application. During this process we will ask the participant to talk about their experience, their thoughts, and their concerns for the application.

Metrics

The metrics for this study includes errors made while doing the tasks listed above, the length of time a task takes, process of completing tasks, and a series of questions once they have completed the tasks. We will take note of any tasks that take longer than others to complete and emotions displayed while trying to complete each task. The participant's thoughts will be

recorded as they say what they think while navigating our app. We will also take note of any times the participant gets distracted from completing a task.

Questionnaire

We will ask a series of questions during our study that will prompt the user to complete tasks, ask for their thoughts, and provide feedback for our application. While completing the tasks, if the participant does not verbalize concerns, we may prompt them to describe their thoughts as well. The following questions and prompts will be given:

1. Could you please sign up on our application?
2. What are your thoughts on this process?
3. Could you find an event that you would like to attend using our application?
4. Could you find an important location near you and contact information relating to it?
5. Could you please go to chat with someone near you in our application?
6. Are there any features that were confusing to find?
7. Do you have any suggestions for improving the design of the application?
8. What was your experience like using this application?
9. Would you use this application again?
10. Would you recommend this application to any of your friends?
11. Do you have any other thoughts to share about our application?