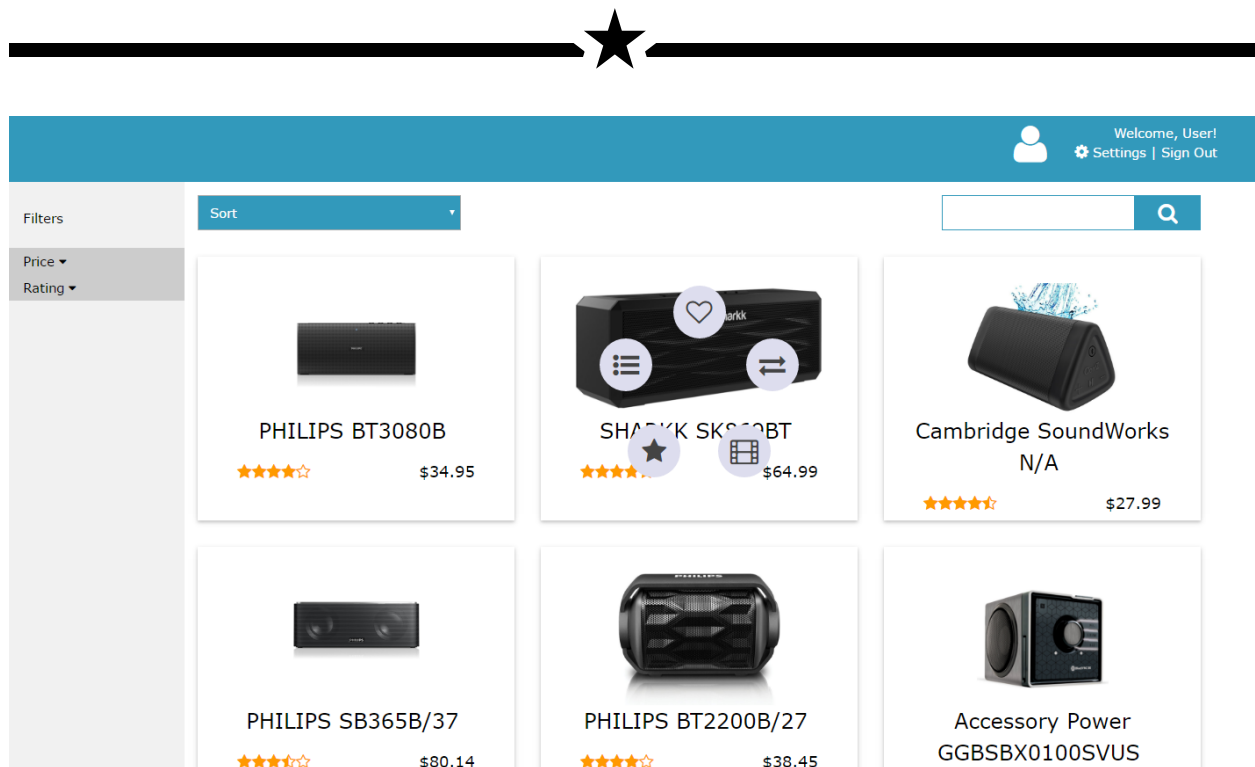# NIVEDHAN MANAVALAN PORTFOLIO

★

UX Designer & Product Enthusiast

COMPARATIVE SHOPPING CONCEPT

★

For this project, we were given the task of observing a comparative shopping experience and then based on the observation create an interaction that would facilitate an improved shopping experience. Before we began the process of user observation, We went through the comparative shopping process ourselves to see if we could find any usability issues that required further research.


I noticed something odd about how the products were named. All the product specifications were written in the product name rather than in the description page. Suspecting a difference in the System model of

Amazon and how the user's mental model was created, we conducted some user observation tests where we asked the users to perform a task of buying a Bluetooth speaker by comparing alternatives with no restrictions.

One of the things we noticed was that users sometimes decided on the products they purchase directly from the search results page. They only researched products that were selected in the first step. We also identified that three sources of information were important in the decision-making process: Reviews; video reviews and specifications. We therefore wanted to create an interface that would enable access to this information straight from the search results page.
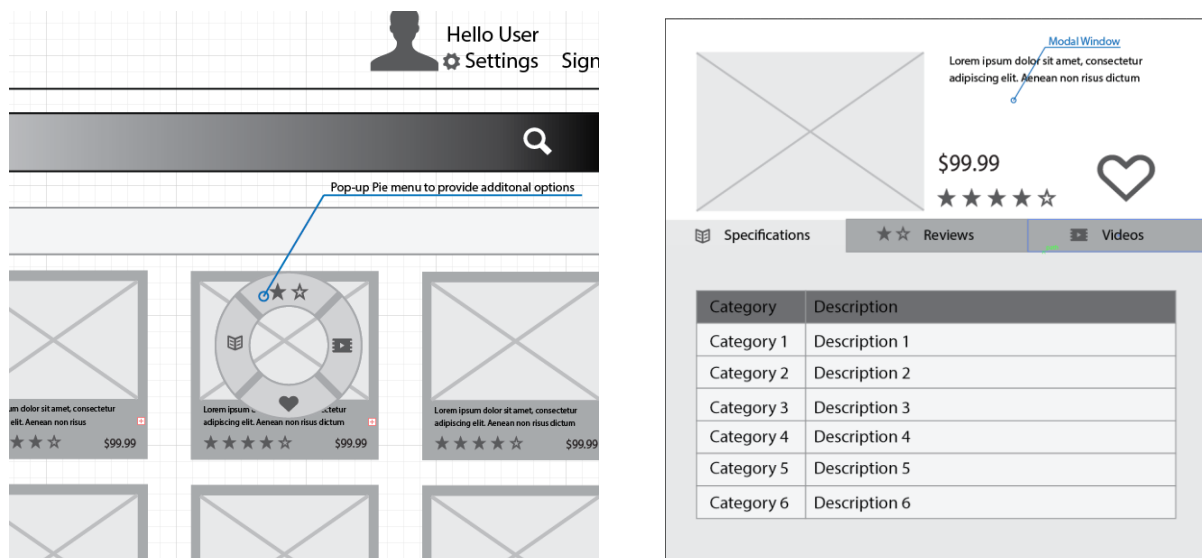

A functional prototype was created based on the wireframes. We conducted another round of usability tests and tweaked the final design based on responses. The links below document the project in 'ideamache' a Texas A&M lab creation for storyboarding and to the functional prototype which has been designed to work in the chrome browser.

Client: **Course Project**   Date: **October 2016**   Prototype: **Functional Prototype**

ANNOTATING TRAILS
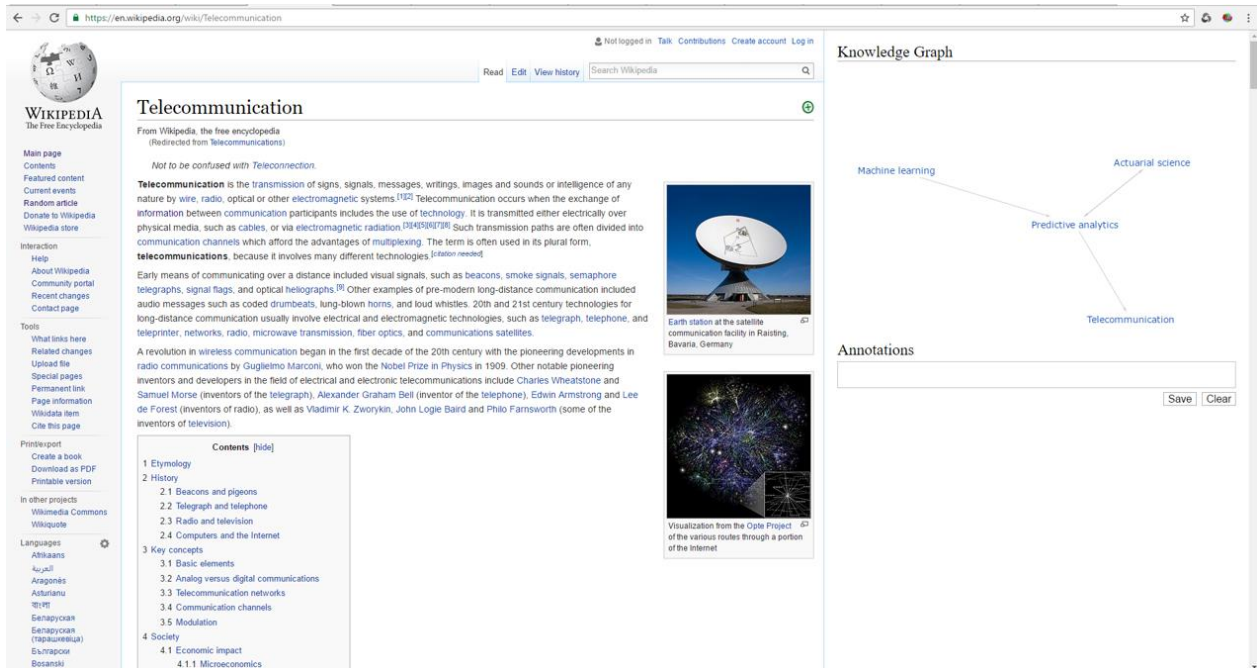
This project was a part of my Human Centered Computing class. While brainstorming for ideas on how to come up with unique ways improving interaction that could render itself well for usability research we couldn't agree on any of the ideas. My friend Aaron then brought up the Wikipedia browsing problem. Here is how it happens:

1. You start browsing Wikipedia for any topic that you wanted to search about say 'rock and roll'
2. You come across a link about a band that you know about and you click on it
3. You start browsing randomly about their influences, their philosophy and where they have toured
4. You find yourself reading a page about the American Revolutionary War

The only question you are then left with is:

This immediately resonated with all of us, I remembered this old image of the google Knowledge graph which showed bubbles of information related to each other. This became the inspiration for our first prototype. The idea was to embrace history in its real dimension and not as a list of links that you visited and not even a linear breadcrumb but a 2-dimensional graph which tracks your progress in all directions, backwards forwards, through forks in browsing. This creating a realistic representation of the browsing history. We called this a knowledge graph after its namesake
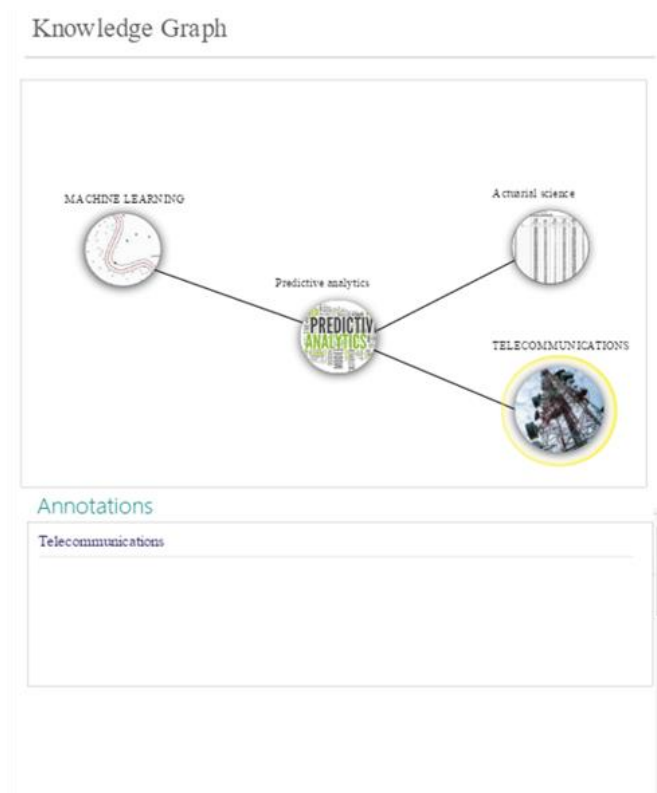
The idea was then put to test, we took user feedback, iterated design, performed usability testing and even wrote down the research implications. We found that such a tool improved sense-making and increased learning ability for anyone trying to learn. This tool could ideally be ported to be a universal browsing history tool. but its utility is magnified in a closed sandbox environment.
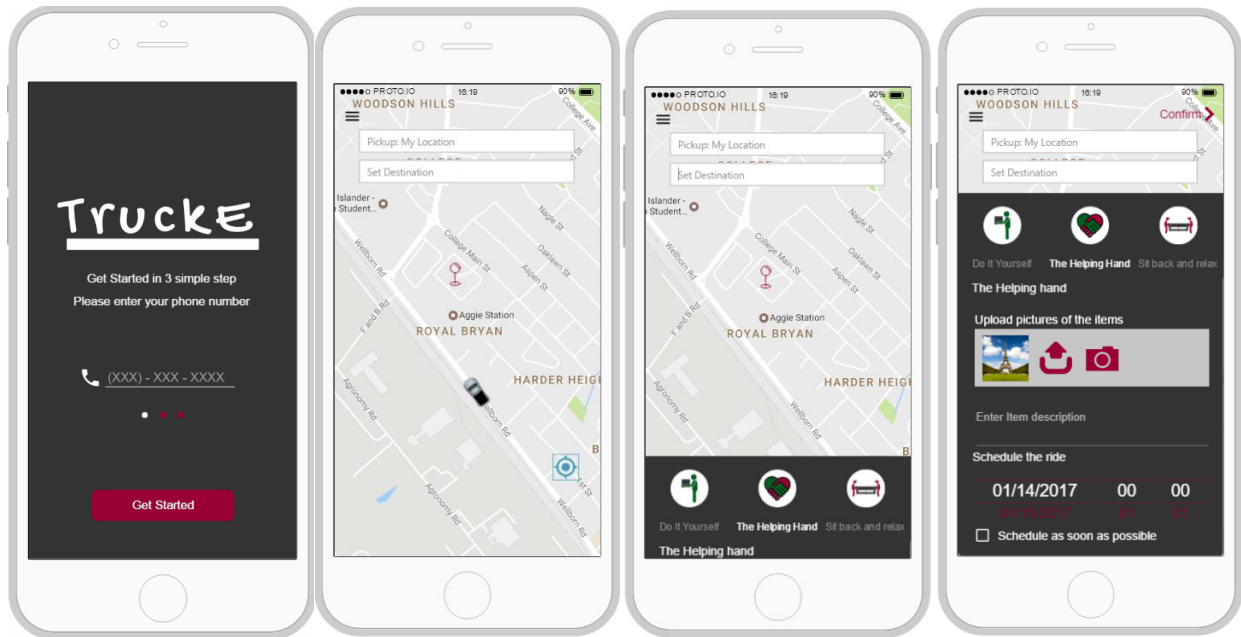
Based on the inputs we updated the design to its final form given above. More details are available in the pdf linked below and the tool itself is available in the chrome extension store which is also linked below.

Client: **Course Project**   Date: **December 2016**   Prototype: **Chrome Extension**

TRUCKE

★

What's so unique about a uber clone? Turns out, a lot. Trucke is a student owned College Station start-up trying to get into the gig economy by bringing together Students who move to a new house and truck owners who can help them.

In essence, Trucke wants to prevent moving from looking a lot like this

The founders of trucke wanted to enable students in the college station community to move without using expensive services like uhaul. They started with a trial run of their service this past summer and got a lot of positive feedback and inputs from the community. I worked with the founders to distill this customer data and suggest how to merge their business process with the uber model. The founders came up with 3 pricing tiers based on their experience

Do it Yourself   The Helping Hand   Sit Back and Relax

The difficulty of the business model that their competitors faced was that there were too many steps which irritated the customer. Therefore, I had to reduce the steps taken to confirm a booking and make sure they meet insurance and other regulatory obligations. They also needed to let their drivers know about the items that they would be moving to help them decide if their trucks would be able to handle them. The final design factored all these constraints. The founders also wanted to let their branding shine through the design with a light maroon and gray which indicated ties to Texas A&M university without infringing on their branding

Client: **Trucke Prototype**   Date: **January 2017**   Service: **High Fidelity**

WEATHER GENERAL [WXGEN]

★

Weather General is a weather startup and a client of Startup Aggieland incubator. The founder and CEO Neil "Doc" Sanger is a veteran in the field of meteorology and he wanted to provide more accurate weather information using proprietary data. When he followed the lean startup methodology he discovered a niche market in small business such as event planners and farmers who were at the mercy of weather conditions

when they planned their activities sometimes leading to thousands of dollars in lost revenue. the Weather General team therefore pivoted and targeted this new market segment. They created a prototype to communicate their needs to the developers.

EXISTING PROTOTYPE

Their design has functionality and usability and captured all the nuances of the product but it didn't communicate the business model in an elegant way and the product had to be explained to the customers. Their original design (below) was a tad confusing and required time for the customers to get accustomed to

CURRENT PROTOTYPE

I met the team at Startup Aggieland and offered my help. I sat with them to understand their business model and got their customer interview data and analyzed the problem. I approached the problem from the point of view of the customer and discovered that what they were interested in was knowing if their activity was a GO or a NO-GO. I applied Ben

Schniderman's mantra of **Overview first, zoom and filter, then details on demand.** to the problem and came up with the design below
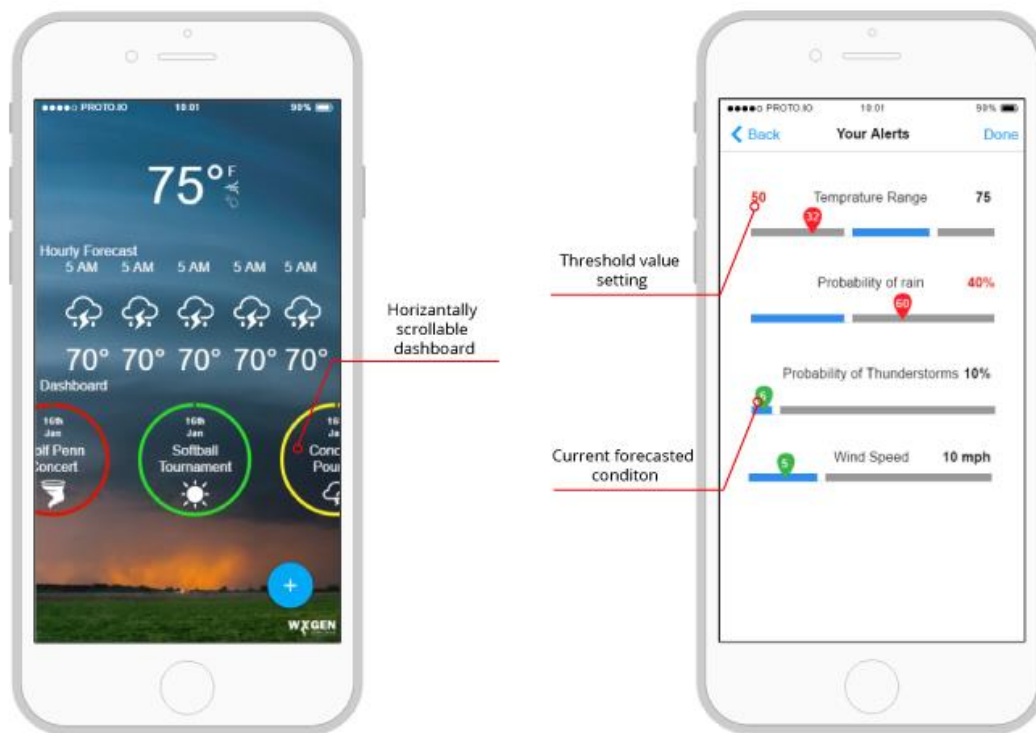

The rule of thumb was to keep the design simple and familiar while incorporating their unique value proposition. While reusing a generic weather app theme, I added in a horizontal-scrolling dashboard which would let the customer see at a glance about what they needed to know. They could also click on an event and get more information, alter thresholds and other variables as needed. This new design was well received by the team and their customers and Weather General has since received funding to take their product to the next stage

Client: **Weather General**   Date: **November 2016**   Service: **High Fidelity Prototype**

HAPTIC AID

★
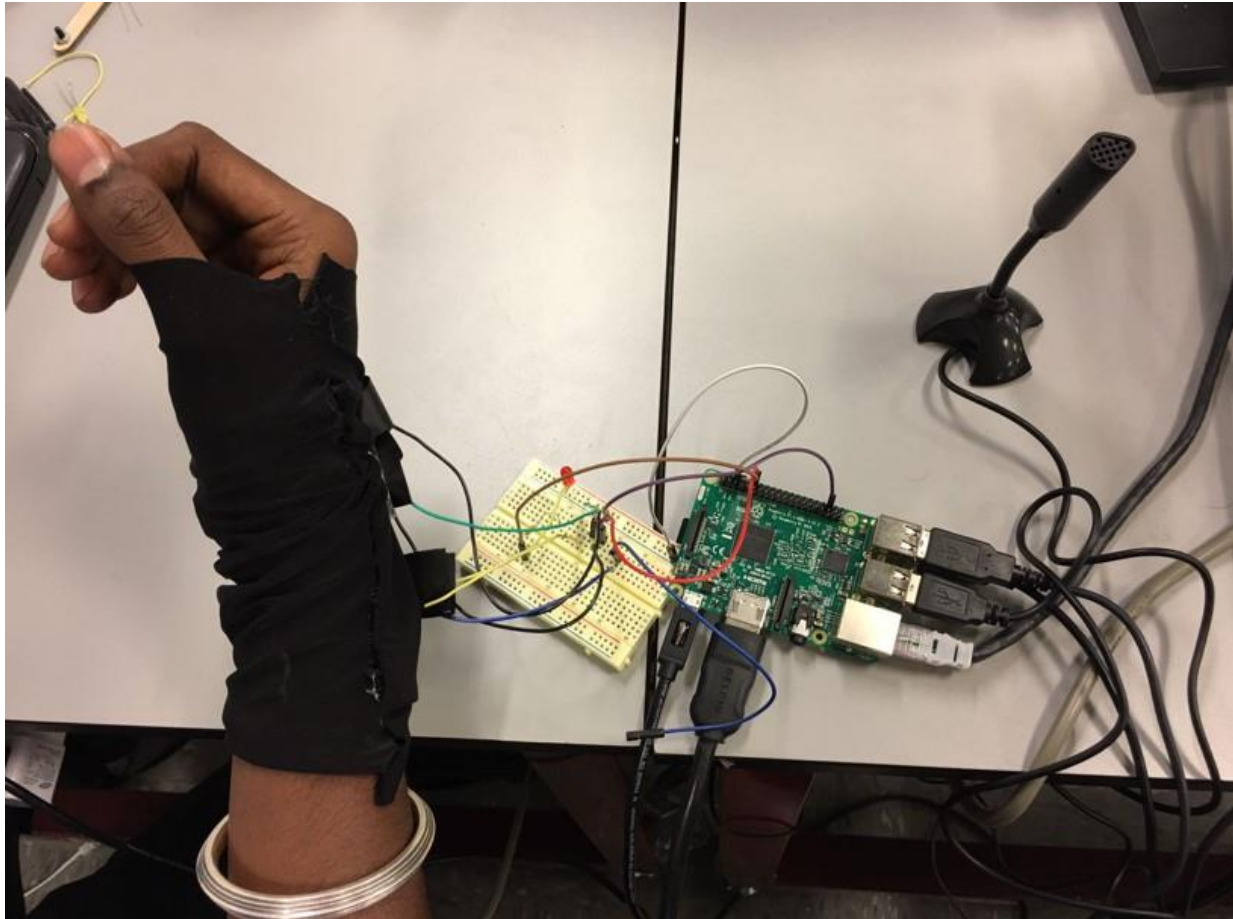
UX design is not limited to the realm of software, and it is sometimes necessary to augment the experience of a sense other than the visual. I got the idea of using haptic motors to make audio available through an enhanced sense of touch while watching a video where they used vibrating chairs to allow the hearing impaired to experience music. I took the Idea to Aggies Invent an innovation competition to flesh it out.
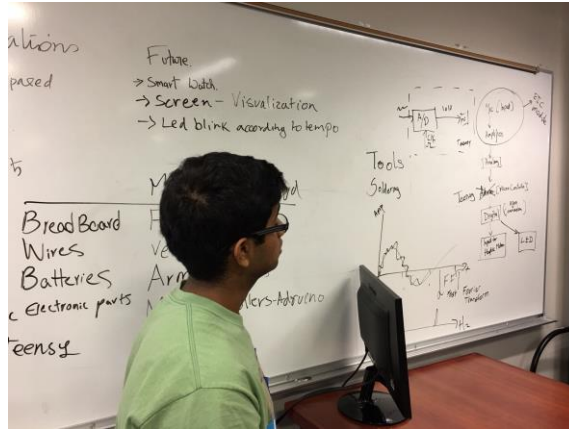
I worked with a team of engineers to bring the idea to life making paper prototypes to show how the product would work. We used a Raspberry Pi and retrofitted a microphone to get sound input and output that information to the prototype sleeve based on amplitude of the sound.


The Link to the working prototype demo is below. The purpose of this proof of concept is not to bring a concept to market but to understand innovative ways of improving interaction and experiencing the world around us. Imagine being able to perceive the world in a whole new dimension than what you already know. It is a glimpse into the future of user interaction and experience design

Client: **Proof of concept**   Date: **September 2016**   Prototype: **Prototype Demo**

YELP MOCKUP

★
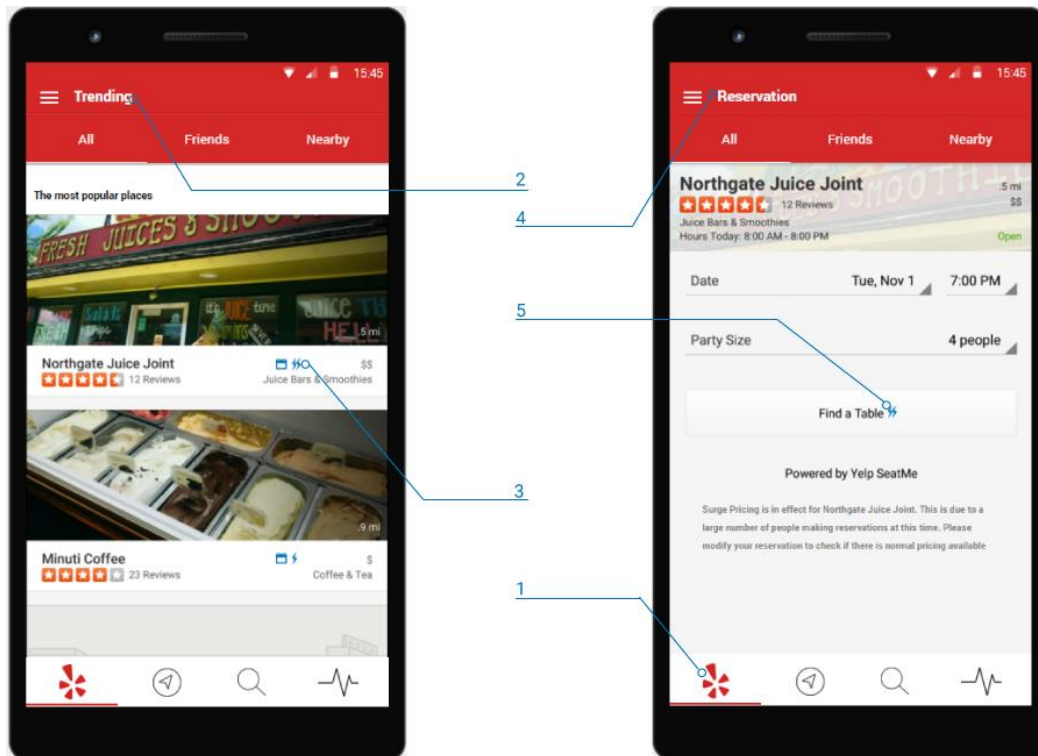
PROJECT DETAILS

1. **Yelp Icon:** The Yelp icon symbolically signifies a place that stands out from the rest, a place that people want to be at, a place that is special. Therefore, instead of a trending icon, I chose to go with the yelp icon to signify trending
2. **Trending Page:** The trending screen showcases restaurants and other places that are regularly 'booked out' this information is curated by using the restaurant's reservation system
3. **Surge indicator:** The indicator denotes that the restaurant is no currently experiencing surge pricing, like the $ icon, a higher number of icons indictes a higher reservation surge price
4. **Reservation Page:** The Reservation page is like the existing reservation page. The main thing to change in this page is the surge indicator
5. **Surge Notification:** The final surge indicator denotes the ongoing surge rate. The surge price is only for the reservation/ concierge fee and not on the price of the menu items

PROJECT DESCRIPTION

This is a prototype for showcasing a Surge Pricing business model. The thing about Yelp that kind of defied my logic was about how Yelp made money of the people who give its ratings till it struck home that they didn't. The money came in from the side of the business. On further research I found this to be the greatest criticism of yelp, that it didn't monetize the consumers. I had this in mind and remembered once when I was trying hard to get a reservation for a date, and I was willing to shell out extra that the idea struck me. Why not have an uber like surge pricing model for restaurants and other limited capacity areas such as golf courses and movie theaters, if there is demand then people would pay, it is simple market economics

An additional motivation behind this idea was a friend of mine, who insisted on visiting all the hot new restaurants in town. He wanted to visit all the happening places and to check-in there. For him it would be great to be able to filter restaurants based on how many people go there, the more exclusive the better.

I therefore created this prototype as a means to bring together these two needs. To allow people a way to bid higher to a place they wish to go and for the restaurant or organization to spread out their customers.

TESTING THE IDEA

The maxim that my mentor often repeated was that "No Idea survives first contact with customers" so to confirm if I had a business model worth pursuing I went out and interviewed people, I called on 3 restaurants, a golf course and 2 Laser Tag arenas. I also spoke to a professor of mine who played golf and a few students.

I learnt from restaurants that their biggest problem with reservations is no shows. in fact the restaurants flat out refused to consider charging customers for reservations, mainly because the customers would just take their business elsewhere. They expressed frustration over the fact that the customers could give them a bad rating but they still had to put up with them even if they don't show up and cost them on their margins

I however had a more positive response from the golf course and laser tag arenas. they said that it would make sense to collect a higher reservation fee. They were confident that they wouldn't lose their clientele because there aren't many alternatives. but they said they would need to check when would be the best time to implement a surge pricing model. The Professor and students also mirrored this opinion, they said they might pay for the golf course or laser tag locations but they wouldn't pay for a restaurant

Client: **Proof of concept**   Date: **November 2015**   Tags: **UX Design; Product idea**