CS 147 Autumn 2015: Assignment 9 (Heuristic Evaluation Group Template)
Instructor: James Landay

Heuristic Evaluation of [Window]

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1. Problem

Window uses AR to allow shoppers to quickly look through clothing, all from the storefront window.

2. Violations Found

1. [H2-1: Visibility of Status] [Severity 2] [Found by: , ,]

When browsing through clothes, the app doesn't indicate which store is being shopped. Even though the user might know which store they scanned, they might perhaps want to make sure that the app is correct. Confirm which store has been scanned, and display its name while shopping.

Fix: Place the stores logo or name somewhere on the page. You can replace the "Window" logo on the top of your screen with the store name, for example.

2. [H2-1: Visibility of System Status] [Severity 3.5] [Found by: , ,]

Right now there's not too many items to flip through, but I can imagine when looking through a real store there can be quite a bit more, without any clear indication of how deep in you are, how many there are total, or without any ability to quickly scan through and choose to look more closely at what items you find interesting. I can see this getting tedious for the user quickly.

Fix: Make it possible to quickly reach a specific clothing article in a selection, or to browse the whole collection of clothes.

3. [H2-1 Visibility of System Status] [Severity 2] [Found by:]

A pin to indicate where you are on the map would be super helpful.

Fix: Put a user pin on the map

4. [H2-1. Visibility of system status] [Severity 2] [Found by: , ,]

During and after sharing, it is not always visible what is being shared, e.g. what the receiver would see when they receive the shared item.

Fix: Make what has been/is being shared more clear, for example through a small preview.

5. [H2-1: Visibility of System Status] [Severity 1] [Found by:]

There's no way to see which clothes have already been added to your closet while shopping.

Fix: Some indicator of whether or not you've already added that clothing to your closet.

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6. [H2-1: Visibility of System Status] [Severity 2.5] [Found by:]
In the process of scanning a store name, the user has no indication of whether or not the store name is centered within the scanning region. The user is unsure whether or not they positioned the store name correctly on the screen.
Fix: There should be some sort of indication of whether or not the store name is correctly aligned within the box (This could be done with color- slightly red colored box for not yet recognized and slightly green colored box for recognized)

7. [H2-1: Visibility of System Status] [Severity 1] [Found by:]
Not clear when app is in process of recognizing a store
Fix: Include a loading animation or recognizing animation a la shazam

8. [H2-2: Match Sys & world] [Severity 4] [Found by: , ,]
Not sure what my closet would be in this context or what it means to the user. Coming in cold I might assume it's a list of things I already own or like so that the app builds intelligence as to what I might like. Not sure if users would add clothes that they bought, will buy, or are considering buying to their saved items — since in each case, the mental model could either be a shopping cart, a fitting room, or a closet depending on the intention for saving the clothing article.
Fix: This is cute and thematic but unclear, choose a different name or have an introduction to it so users know explicitly what this is for.

9. [H2-2: Match Sys & world] [Severity 2] [Found by: ,]
Settings maybe isn't the best place to put measurements. Typically you'd see this customization under something under a tab more like "my profile"
Fix: Move measurements into a more 'personal' tab

10. [H2-2: Match Sys & world] [Severity 2] [Found by:]
There's no personal profile tab, not that there's any strong need, but if you create a profile I'd imagine users would want to be able to fiddle with it, at the very least the image. Also: are there user names? Is this connected to facebook? How do friends find each other?
Fix: Allow users to interact with their own profile.

11. [H2-2: Match Sys & world] [Severity 2] [Found by: ,]
Mannequins that fit the clothing don't represent the user's actual size. (Thus, if one were to select and extra-large shirt when they usually wear a small, this big size would reflect on the mannequin and would show how it looks like in reality).
Fix: Make mannequins reflect size.

12. [H2-3: User Control & Freedom] [Severity 3] [Found by: , ,]
After entering your preferences, there's no way to quickly tweak or edit them once looking at clothes from the menu. You'd have to go back to the start shopping scene which feels like completely starting over.

Fix: Make it possible to access the style preferences from the shopping screen. You could put a tab on the menu bar.

13. [H2-3: User Control & Freedom] [Severity 3] [Found by: , , ,]
Confused as to what the plus button does, is there a quick way to star or favorite an item and come back to it? If it adds to the closet, make it more clear that that is what it's doing.
Fix: Pop up text saying that it has been added to your closet, or just an overlayed icon. Be more intentional about the iconography.

14. [H2-3: User Control & Freedom] [Severity 2] [Found by: ,]
When looking for nearby stores, there's no search bar
Fix: Add a search bar

15. [H2-3: User Control & Freedom] [Severity 1.5] [Found by:]
Why constrain users only to stores they're physically nearby? I can imagine this app appealing to someone on their way to the mall in the car, or even someone browsing items that their local Vans may have to see if it's worth going to today.
Fix: Allow users to find or search stores they're not nearby

16. [H2-3: User Control & Freedom] [Severity 3.5] [Found by:]
I'm interested in what the back of the clothes look like, or if there's multiple color options. No clear way to find this.
Fix: Add more images, give people more information about the garment when they click into it.

17. [H2-3: User Control & Freedom] [Severity 2] [Found by:]
This is hard to do on a med-fi prototype, but I found myself swiping on the image hoping to get a 360 turn around of the item like I would be able to on a real mannequin.
Fix: Implement this feature

18. [H2-3: User Control & Freedom] [Severity 3] [Found by: ,]
When choosing "scan a store" from the menu there's no way to go back to where you were if you change your mind.
Fix: Add a back button

19. [H2-3 User Control & Freedom] [Severity 3] [Found by: ,]
The app doesn't have the option of removing items from the virtual closet.
Fix: Add a way to allow users to delete items from the virtual closet.

20. [H2-3: User Control & Freedom] [Severity 3] [Found by: , ,]
I can send items to friends, but how does it get delivered? Is it in-app? If so, where's my own inbox and how can I see items I've previously sent to friends?
Fix: Add an inbox, notifications.

21. [H2-3: User Control & Freedom] [Severity 3] [Found by:]
If I want to send something to someone who doesn't have the app, how might I send it through a third party service?
Fix: Have an option to send via facebook, or SMS.

22. [H2-4: Consistency & Standards] [Severity 2] [Found by:]
I can create a "closet", is there someway to send this to the store so they can prepare it for me before I get there? (Put the items on hold)
Fix: Be able to send this to stores, make scanning each individual item by barcode less clunky

23. [H2-4: Consistency & Standards] [Severity 3] [Found by:]
Is there a clear way to buy online in case I don't want to buy in store for some reason?
Fix: Transfer my cart to an online shopping cart on the store's website, or give me links to the items on the online store.

24. [H2-4 Consistency & Standards] [Severity 2] [Found by:]
The interface used an iOS "segmented control" bar for picking gender. The bar is usually used for switching views in iOS, not picking options, and so is a bit inconsistent with the common usage.
Fix: Use an element that usually indicates picking an option, like an iOS picker.

25. [H2-4 Consistency and Standards] [Severity 1] [Found by:]
In the settings menu it says 'Stores Nearby', whereas it says 'Windows Nearby' on the map.
Fix: Make both say 'Windows Nearby'

26. [H2-4 Consistency and Standards] [Severity 3] [Found by:]
In the filtering menu, I think it can be a touch confusing to have all filters off meaning 'show everything'. Also, are you filtering using AND or OR? Eg, if I have 'Active' and 'Formal' selected, will you show me activewear and formalwear, or just clothing that fits both categories?
Fix: Put some sort of small text, like 'include' or something might clear it up.

27. [H2-4: Consistency Standards] [Severity 2] [Found by:]
When one is adjusting user preferences and then wants to begin shopping, clicking the "OK" at the bottom of the screen (as explained in the README of task 2) will start shopping. On the main screen and the top of the customization screen, clicking "Start Shopping" would also start the shopping process. There is more than one button to represent the same action of beginning the shopping process.
Fix: the "OK" button could be changed to a "Start Shopping" button to maintain consistency.

28. [H2-5. Error prevention] [Severity 3] [Found by: , , ,]
It's not entirely clear that the up arrow and "start shopping" buttons are separate items in the main screen. Users could easily make the error of entering one when they meant the other. It's also unclear that there's

a way to just “start shopping” without setting your preferences every time. It’s convenient to set your preferences once and have them stored, but not entirely obvious from the visual design.
Fix: Make the fact that they are two separate buttons more clear.

29. [H2-7 Flexibility and Efficiency of Use] [Severity 3] [Found by: , ,]
How do you set your budget (like for task 2?). I’m imagining that’s just something that didn’t make it into the prototype.
Fix: add a filtering-by-price option in preferences; also I’m always a fan of “fuzzy” ranges

30. [H2-7: Flexibility and efficiency of use] [Severity 2] [Found by:]
When attempting to share an outfit with one of your friends, best friends appears on top followed by a long list of one’s friends. One must search through the list and find the friends they want to send it to.
Fix: Include a “Search:” box at the top to ease the outfit-sharing process.

31. [H2-7 Flexibility and Efficiency of Use] [Severity 3] [Found by:]
What’s the distinction between best friends and frequents? Also, how do you get to your normal friends?
Fix: picking one or the other, and then using the list to list all of the user’s friends, would probably work well.

32. [H2-7 Flexibility and Efficiency of Use] [Severity 3] [Found by:]
How do you add friends?
Fix: Have this as an option on the friends tab

33. [H2-7: Flexibility & Efficiency of Use] [Severity 2] [Found by:]
After scanning a store, it’s not clear what function the store window screen serves. It takes one more tap to start the task of either shopping or picking a style. Take the user to a more specific task immediately.

34. [H2-8: Aesthetic & Minimalist Design] [Severity 1] [Found by:]
Looks a little like windows 8 but that’s not necessarily a problem
Fix: Change the color scheme or the name??? Or the square aesthetic.

35. [H2-8: Aesthetic & Minimalist Design] [Severity 1] [Found by:]
Bar code is a bit clunky especially if it shows up every time you select a specific article of clothing.
Fix: Have the bar code be hidden initially. Make it a pull up or tap to reveal.

36. [H2-8: Aesthetic & Minimalist Design] [Severity 0.5, until you see it then it’s a 4] [Found by:]
For the logo on the main page, the top curve feels like it should be more rounded, and there’s a slight disparity in the connection between the top part and the main square. I’m sorry - this is ***REALLY*** nitpicky.
Fix: move the top round over a pixel or two, and round it out.

37. [H2-10: Help & Documentation] [Severity 2] [Found by: , , ,]
Some functions may not be completely obvious to the user, like the ability to swipe to access the sidebar, or swiping to change clothes. While a lot of your design is intuitive, there’s always that one person who’s never heard of swiping on a phone.
Fix: Provide tips that teach the user about these possibilities or make them more obvious through visual cues. Maybe have it peeking out a bit or bounce during a tutorial to let users know it’s there. Maybe an optional tutorial would be nice.

3. Summary of Violations

Category	**# Viol. (sev 0)**	**# Viol. (sev 1)**	**# Viol. (sev 2)**	**# Viol. (sev 3)**	**# Viol. (sev 4)**	**# Viol. (total)**
[H2-1: Visibility of Status]	0	2	4	1	0	**7**
[H2-2: Match Sys & World]	0	0	3	0	1	**4**
[H2-3: User Control]	0	1	2	7	0	**10**
[H2-4: Consistency]	0	1	3	2	0	**6**
[H2-5: Error Prevention]	0	0	0	1	0	**1**
[H2-6: Recognition not Recall]	0	0	0	0	0	**0**
[H2-7: Efficiency of Use]	0	0	2	3	0	**5**
[H2-8: Minimalist Design]	1	2	0	0	0	**3**
[H2-9: Help Users with Errors]	0	0	0	0	0	**0**
[H2-10: Documentation]	0	1	0	0	0	**1**
Total Violations by Severity	**1**	**7**	**14**	**14**	**1**	**37**
Note: check your answer for the green box by making sure the sum of the last column is equal to the sum of the last row (not including the green box)						

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4. Evaluation Statistics

Severity / Evaluator	**Evaluator**	**Evaluator**	**Evaluator C**	**Evaluator D**
sev. 0	0	1	0	0
sev. 1	3	2	0	2
sev. 2	9	4	5	5
sev. 3	10	6	7	5
sev. 4	1	0	1	4
total (sev. 3 & 4)	11	6	8	9
total (all severity levels)	23	13	13	16

5. Summary Recommendations

Overall, the app is very minimal and aesthetically pleasing, which helps make it fairly intuitive and easy-to-use.

Most violations are minor and are very easily mended, and probably stem from this standard of minimalism in the app which is necessary since it uses augmented reality and shouldn't have too many elements that block the AR view. Since it's internally consistent with a unified color scheme and typography, it just needs to make sure that it's also consistent with current UI standards across iOS applications.

One piece of feedback that I'm not sure of is the concept of the virtual closet. I'm not sure if users would add clothes that they bought, will buy, or are considering buying to their saved items — since in each case, the mental model could either be a shopping cart, a fitting room, or a closet depending on the intention for saving the clothing article.

Another question which isn't shown in the prototype is how adding or sharing a complete outfit differs from adding or sharing one article of clothing, at least in terms of what the preview looks like. In any case, the app is very solid and feels complete even at this resolution of prototyping. I'd be excited to see it completed and even use it while shopping!

Speaking generally, some consolidation of menus/settings might be nice (have one place to set everything so that you can focus on shopping throughout the rest of the app) but that's pretty speculative.

I would look more at what online shopping is doing. It's hard for me to see the appeal of this app over just looking online, which gives me recommendations, materials, fit suggestions, color options, shots on multiple models etc.

Additionally, I'm not quite sure where the appeal in this is in being physically on site. Making that aspects importance more obvious or reframing your product would help with that ambiguity.

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A short tutorial at the start of the app could be included to demonstrate how the app is used. Some idea should be given of how AR would be integrated into such an app. I suggest that the user takes a picture of themselves and the clothes would appear in a custom-fit manner on their photo as opposed to appearing on a lifeless mannequin. This would definitely make the shopping experience more personal for each user.

Overall, good stuff! We're excited to see the final product!