Heuristic Evaluation of Shoppy

1. Problem

Shoppy is a chat-based personal shopping assistant that streamlines the shopping experience for users' by predictively suggesting that users add items to their cart. Shoppy can predict items that you buy routinely, remind you when you're running out of an item, and recommend new items based on your social network's purchasing habits.

2. Violations Found

1. H4 - Flexibility & efficiency of use, Match between system and real world, Consistency & Standards / Severity 3 / Found by: A, C, B, D

The shopping cart/bag button in the top left corner is confusing. The user expects that clicking this button would give them details about their shopping cart. The button surfaces a new chat card for the user which contains an abbreviated summary of their cart, but they must click the card to navigate to the actual details about their cart.

Fix: When users click the shopping bag icon, take them directly to a detailed view of their cart from which they can check out with one click.

2. H3 - User Control and Freedom / Severity 1 / Found by: A

When users add items to their cart, there is no quick way to undo the action if it was done erroneously. Users have to do 4 clicks & 2 screen changes (shopping bag icon to checkout text, click Check Out to go to cart page, click item, click minus on the amount for the item) which is high friction for a potentially frequent use case.

Fix: When you show a user that they have added an item to the cart (discussed in violation #2 above), include an "Undo" button in the interface.

3. H4 - Consistency & Standards / Severity 3 / Found by: A, C

It is not clear what the difference between the Recommend and Remind buttons is, particularly from the user perspective. Knowing what your tasks are, it seems that Recommend suggests items that Shoppy can predict from a wide array of data including your social network, whereas Remind suggests items that Shoppy can predict based solely on past/routine purchases. Although these require different backend functionality on the system side, for the user the result is the same - Shoppy suggests items they may want for one reason or another.

Fix: Collapse the "Recommend" and "Remind" buttons & their respective flows into one experience for the user.

4. H7 - Flexibility and efficiency of use / Severity 1 / Found by: A

There isn't a way to add all routine, recommended, or reminded items to the cart all at once. In this prototype, the Recommend and Remind actions only showed one item, but when they show multiple items in the real interface (or in the Routine interface in this prototype) there needs to

be a way for users to add all of the items with one click. The power of recommending a batch of items that Shoppy predicts the user will want to buy is less powerful if the user can't buy them all at once.
Fix: Add an "Add All" button at the top of a bundled list of items

5. H2. Match between system and the real world / Severity 4 / Found by: A, B, C, D
When the user inputs text, there are three action buttons based on what the user might want to do that mimic the format of iMessage's text correction/suggestion keyboard layout. It's confusing for the user because they are likely to be familiar with iMessage, therefore making it difficult to recognize that the choices displayed in the Shoppy app are critical buttons rather than text suggestions.
Fix: Create actual buttons that are different in appearance for action recommendations (either before the user types or when the clicks to type), or potentially change the placement of these buttons also.

6. H1 - Visibility of System Status / Severity 3 / Found by: A, B, C, D
When adding an item to the cart, there should be some indication from the system that the action took place. This could be the item zooming up to the corner where the cart icon is located or some sort of color change in the item card. As it stands, the only notification that an item has been added to the cart is a +1 in the top left corner which is very easy to miss.
Fix: Add animation or some form of notification that item has been added to cart. Alternatively, have a dropdown in the top left showing the item being added to the bag. The former would be more in line with your chat interface.

7. H4 - Consistency and Standards / Severity 2 / Found by: A, B, D
When the milk and coffee come up, the milk features an "Add" button while the coffee shows choices in flavor for the item - "Vanilla" or "Mocha" - which, upon clicking, actually add that flavor to the person's cart. So the Add button and the flavor selection button have the same outcome, which is inconsistent and confusing.
Fix: Keep the Add button the same for all items. Find a new spot in the interface for deciding on flavor or other specifications.

8. H8 - Aesthetic and Minimal Design / Severity 1 / Found by: A
When you click on the coffee to see the details of the item, there are several unnecessary points of information and the design is inconsistent with the very minimalist chat interface of the rest of the design. The information on this page is not condensed into what is most useful to the user at this stage.
Fix: Include picture, price, flavors, quantity, and an Add button. Consider adding a description of the item or subscription settings.

9. H2 - Match between System & Real World, H4 - Consistency and Standards / Severity 2 / Found by: A, B

When a user is typing a request to Shoppy, they send the request using the "Return" button. Usually "return" means starting a new paragraph, not sending a message or requesting an action as it means in this case. In this way, the language the system is using does not match what a user would expect of it.
Fix: Rename the return button or keep the return button where it is but change it to mean new paragraph, then add a button labeled "Send," "Request," or something better suited to the action.

10. H3 - User Control & Freedom, H5 - Error Prevention / Severity 4 / Found by: A, B, C, D
Price of items is not visible when users are evaluating them to add to their carts. The prices associated with items should be clearly visible before they click on them.
Fix: Show the price next to the item description in the existing chat interface.

11. H2 - Match between system & real world / Severity 4 / Found by: A, C, D
The three main buttons on top of the typing section - "Routine, Recommend, Remind" - describe the three main tasks that users need to carry out on Shoppy. They do not indicate to the user the action that will be immediately performed by clicking that button. From what I can tell, it seems that the "Routine" button is being used the same as the Enter button when the user has taken a picture or stopped typing. Therefore, the labeling of the button doesn't make sense with the functionality of the button from the user perspective.
Fix: Rename these three buttons to reflect the actions that they prompt so that it is clearly indicated to the user which actions the buttons will take. Alternatively, you could remove the buttons entirely.

12. H6 - Recognition not Recall, H5 - Error Prevention / Severity 2 / Found by: A, B, C, D
In order to prevent users from adding the same item to the cart multiple times unintentionally, there should be some indication on the item card that the item has been added to cart and/or purchased.
Fix: Add some sort of color change or check mark to an item that has already been purchased or added to the cart.

13. H7 - Flexibility and efficiency of use / Severity 3 / Found by: B, C, D
It is hard to add multiple items remove multiple items from the cart. You are forced to increment by one or two only.
Fix: Make add to cart button have "hard" touch capability so that the user can press down hard to get the quantity and swipe finger to change quantity.

14. H8 - Aesthetic and minimalist design / Severity 2 / Found by: B, C
The "more" buttons that are displayed on the cards next to the items, are barely visible. The user may not even seem them at all.
Fix: Either a higher contrast color should be used for the text/button or perhaps, instead of a button, there could be swipe type control where you can just swipe through different options.

15. H3 - User control and freedom / Severity 1 / Found by: C
There is also no place to potentially add coupon codes if a user wants to save money.
Fix: This can be quickly fixed by adding a place in checkout or the shopping cart to add coupon codes

16. H3 - User control and freedom/ Severity 2 / Found by: B, C
There is no place to modify the shipping, or billing information. There should be an easy way to edit address and payment information when checking out.
Fix: Provide an edit button.

17. H7 - Flexibility & Efficiency of Use/ Severity 2 / Found by: B
For a user who routinely uses the application, there should be a faster way to order routine items. Currently the routine card can only display two or maybe 3 items on the screen at a time. For a customer who routinely buys 20 items, scrolling through all these cards would take a lot of time.
Fix: Add a way to change the view like you can on Finder. There should be a large view with lots of information and a compressed view which shows more items with less information.

18. H6 - Recognition rather than Recall / Severity 0 / Found by: B
The "Add" button should be some sort of symbol that clearly means "Add to shopping cart" since this is designed for iOS and space is at a premium. Reducing the text on the page will make it clearer and cleaner.
Fix: Come up with a more aesthetically pleasing "Add to cart" button.

19. H4 - Consistency and Standards / Severity 2 / Found by: B
The image feature results in the same outcome as hitting the "Routine" button. This should not be the case. The card should somehow indicate that the item was found via the image function. Presumably the image feature can be used to search for any item, not just those that are routinely bought.
Fix: Add this functionality. Add unique card for image searches.

20. H5 - Error prevention / Severity 2 / Found by: D
Buttons from cards earlier-on in the chat seem to still be clickable (for example, the Check Out" button is still active even when a user took action on a Remind card below it, which would modify the Shopping Cart. This could lead to errors if the buttons are associated with prior states (for example, if the user wanted to check out with the version of the Shopping Cart that was being shown on the card before a new item was added).
Fix: Make buttons earlier in the chat greyed-out/unclickable to indicate that they're no longer actionable to prevent these errors

21. H1 - Visibility of system status / Severity 1 / Found by: D
The back arrow is labeled "Shopping Cart", but it leads back to the chat page, which is confusing to the user regarding what page they're currently on since the page they're currently

on should be the Shopping Cart. The same issue occurs with the Check Out page where the back button is labeled "Check Out"
Fix: Add a title to the shopping cart page that says "Shopping Cart" and label the back arrow something like "Back to Chat"; Add a title to the checkout page that says "Check Out" and label the back arrow something like "Back to Cart"

22. H1 - Visibility of system status / Severity 2 / Found by: D
Currently, there's no place to view past order history or the status of current orders in delivery. This is probably quite important to users to track their spending, compare previous orders, and make sure that their deliveries are on the way
Fix: Add "Order history" and "Current order status" to the same menu as the Account details.

3. Summary of Violations

Category	# Viol. (sev 0)	# Viol. (sev 1)	# Viol. (sev 2)	# Viol. (sev 3)	# Viol. (sev 4)	# Viol. (total)
H1: Visibility of Status		1	1	1		3
H2: Match Sys & World			1		2	3
H3: User Control		2	1		1	4
H4: Consistency			2	2		4
H5: Error Prevention			1			1
H6: Recognition not Recall	1		1			2
H7: Efficiency of Use		1	1	1		3
H8: Minimalist Design		1	1			2
H9: Help Users with Errors						0
H10: Documentation						0
Total Violations by Severity	**1**	**5**	**9**	**4**	**3**	**22**

4. Evaluation Statistics

Severity / Evaluator	Evaluator A	Evaluator B	Evaluator C	Evaluator D	Total
sev. 0	0% (0/1)	100% (1/1)	0% (0/1)	0% (0/1)	1
sev. 1	60% (6/10)	0% (0/10)	20% (2/10)	20% (2/10)	10
sev. 2	18% (3/17)	41% (7/17)	18% (3/16)	24% (4/17)	17
sev. 3	23% (3/13)	23% (3/13)	31% (4/13)	23% (3/13)	13
sev. 4	27% (3/11)	18% (2/11)	27% (3/11)	27% (3/11)	11
total (sev. 3 & 4)	25% (6/24)	21% (5/24)	29% (7/24)	25% (6/24)	24
total (all severity levels)	28.8% (15/52)	25.0% (13/52)	23.1% (12/52)	23.1% (12/52)	52

5. Summary Recommendations

Consistency:

One of the main issues is consistency.

The current interface lacks consistency in that the "Add" button used to add an item to the cart is not the same for all products (for example the coffee). In addition, since the interface is based on the iMessage UI, it needs to be super consistent with the way users interact with iMessage. For example the "Return" button should be replaced with the blue arrow button that is found in iMessage. The suggestion buttons should be distinguished more clearly from the text suggestion buttons that are used in iMessage since they don't do the same thing. Your team should ensure that the placement of buttons is consistent and the language describing them is intuitive and clearly labeled to the user so that when a user clicks a button they are met with the expected action.

Feedback:

The user should receive some notification or signal when an item is added to cart and/purchased. As it stands, the only change is the number in the top left corner which is very easy to miss. Also, having price and quantity more easily accessible to the user would be helpful. Shoppy should clearly indicate to the user the status of their actions so that the user knows which ones have already been completed.

iMessage:

There may be some value in designing an interface that is more tailored to your specific uses rather than adopting the iMessage interface whose functionality is only tangentially related to your app. For example, there is no way to explore items, sort search results based on price/rating, or filter search results based on brand/store. These features are valuable to customers. It is important that Shoppy has a differentiated interface from iMessage so that the Shoppy team has more freedom to decide the placement of their buttons without needing to consider the action expected in the iMessage interface.

Checkout/Shopping Cart:
The checkout process also needs to be more streamlined and mimic standard check out procedures in apps and the web. If you click checkout, you should check out, if you click your shopping cart, you should see your shopping cart. Removing the in-between screens that are present when you click those screens would be a high priority.

Miscellaneous:
Some recommendations to further this app is to color code messages depending on the message that is received or sent. For example, routine buys may be a tinted purple color and recommendations a tinted blue color. Introducing an avatar or image for "Shoppy" would also draw in more users and further push the AI aspect of this project.

Severity Ratings

        0 - don't agree that this is a usability problem
        1 - cosmetic problem
        2 - minor usability problem
        3 - major usability problem; important to fix
        4 - usability catastrophe; imperative to fix

Heuristics

H1: Visibility of System Status
- Keep users informed about what is going on

H2: Match Between System & Real World
- Speak the users' language
- Follow real world conventions

H3: User Control & Freedom
- "Exits" for mistaken choices, undo, redo
- Don't force down fixed paths

H4: Consistency & Standards

H5: Error Prevention

H6: Recognition Rather Than Recall
- Make objects, actions, options, & directions visible or easily retrievable

H7: Flexibility & Efficiency of Use
- Accelerators for experts (e.g., gestures, kb shortcuts)
- Allow users to tailor frequent actions (e.g., macros)

H8: Aesthetic & Minimalist Design
- No irrelevant information in dialogues

H9: Help Users Recognize, Diagnose, & Recover from Errors
- Error messages in plain language
- Precisely indicate the problem
- Constructively suggest a solution

H10: Help & Documentation
- Easy to search
- Focused on the user's task
- List concrete steps to carry out
- Not too large