Jasper

Intelligent Wardrobe Assistant

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Problem Space

- Outfits are a key component of interpersonal assessments
- Outfit selection can be time-consuming and difficult
- Large wardrobes can result in individuals not taking advantage of their attire
- Individuals do not harness the full potential of their clothing
- A disorganized wardrobe can result in items not being worn—how can individuals properly manage their wardrobe?
Initial Paper Prototype

MORNING JASPER.

SURE. WHAT OPTIONS DO I HAVE?

Good morning Bob. Today is sunny, 74 degrees. You have no schedule today.

Would you like to see some outfit selections?

I LIKE THESE PANTS! I’LL GO WITH THEM TODAY! LET’S SEE SOME MORE TOPS.

EWW... THIS SHIRT LOOKS WEIRD ON THESE PANTS. NEVER SHOW THIS COMBINATION AGAIN, PLEASE.

Here are my recommendations. You like to wear the space needle shirt with these pants.

Nice choice Bob. I have narrowed it down to these tops based on your selection on bottom.

You can swap through them.

Sorry Bob, I will put that down on my notebook.

Just kidding, I don’t have a notebook.
Initial Paper Prototype

Jasper! I need help finding my black T-shirt!

I have found five T-shirts that match your description. Which one do you want, Bob?

I can't see you now! I'm busy in my wardrobe! What are they?

Sure. No. 1 has red stripes at the bottom left corner. No. 2 has a little pocket and you wore it last Friday. No. 3...

Yes! No. 2! I want to find No. 2!

It should be beeping right now.

Bee bee bee bee!
Testing Process: Heuristic Evaluation

• **User Control and Freedom:** Need more intuition on how to use a mirror interface
  • Is it a touch screen?
  • What are the voice commands?
  • How should I switch between items?

• **Visibility of System Status:** Need an icon or progress bar to indicate which item is being picked for now.

• **User control and Freedom:** Need to enable user customized filter on outfit selections
Testing Process: Heuristic Evaluation

– Step 1: Refinements after Heuristic Evaluation

• Jasper will give a brief tutorial for first time users.

Hello. My name is Jasper.

Swipe left and right to switch between items.

If you see something you like, tell me, and I will add it to your outfit for the day.
Testing Process: Heuristic Evaluation
– Step 1: Refinements after Heuristic Evaluation

• Allow users to input voice command on following features:
  • Access additional information
  • Filter search results and outfit recommendations
Testing Process: Usability Test 1

- **Aesthetic and minimalist design:** The information bar on top of the mirror is confusing and not necessary when dressing.

- **Consistency and standards:** Using real human improvised voice interaction is confusing and gives out too many hints.
Testing Process: Usability Test 1

– Step 2: Refinements after Usability Test 1

- Ability to remove Time/Calendar/Weather display with gestures.

- Have the scripts predefined and makeup responses according to the flow chart as well as some special guidelines.
Testing Process: Usability Test 2 & 3

• **Help and Documentation**: He did not fully understand the coverage of Jasper’s functionalities.

• **Recognition rather than recall**: He could not remember the commands and gestures throughout the process.

• **Consistency and standards**: He did not realize that the default section was already based on selection made already.
Testing Process: Usability Test 2 & 3

– Step 3: Refinements after Usability Test 2 & 3

• Jasper will display and visualize user’s voice input.

• Jasper will offer to help if there is no user input for a period of time.

• Jasper will specifically tell the user that the following recommendations are based on selections already made.
Final Paper Prototype

Task 1 Outfit Selection and Visualization

- Time, Weather, and Calendar Alert
- Current State Indicator
- Recommended Top
- Next Swipable Top
- Recommended Bottom
- Recommended Shoes
- Selection Lock Indicator

Task 2 Item Location

"Jasper, where is my black shirt?"
Digital Mockup
Digital Mockup

“Jasper, the blue shirt works”

“Jasper, dress me up”

“Jasper, dress me up”
Digital Mockup

Which black shirt are you referring to?

1.  
2.  
3.  
4.  
5.  
6.  

Sounding shirt #4...

1.  
2.  
3.  
4.  
5.  
6.  

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CSE 440: Jasper
Digital Mockup

Welcome to Jasper.

To begin, try one of the following commands:

- "Dress me up"
- "Locate an item"
In Summary...

- Iterative design helped us make subtle improvements after each round of feedback
- Testing with consistency takes practice
- User confusion during testing leads to major design improvements
- Consider all feedback