AUGMENTED FASHION

CSC 591, Spring 2019

Stage 5: Evaluate

Team:

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Client:

Prof. Pat Fitzgerald

Participants:

- Number of participants: 5
- The characteristic we were looking for:
  - People with some familiarity with the fashion
  - Familiarity with Augmented Reality
  - Even gender distribution

- The characteristics of the participants:
  - Students
  - Ages 23 to 28
  - 2 male, 3 females
  - Varied fashion knowledge level
    (from little to very knowledgeable)
  - Varied AR exposure (some to regular exposure)

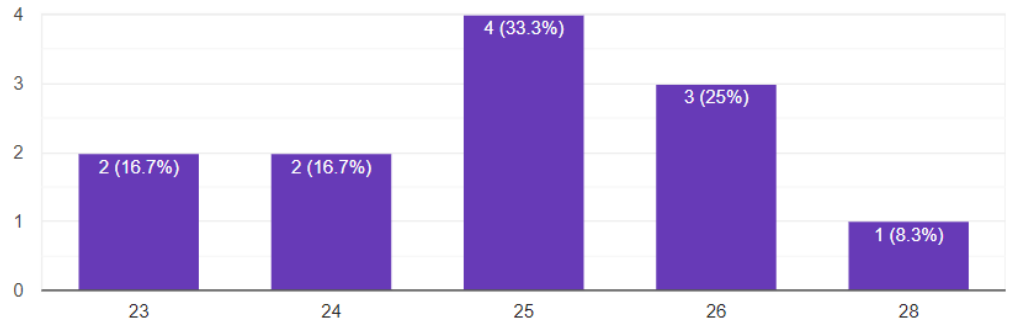
- We sent out following screener forms to people from varied background (student to working professionals). We received 12 responses and we chose 5 of them who met the characteristics we were looking for. We found that people were familiar with AR more than we thought. It was a little difficult for us to find people with fashion backgrounds.

Link to survey: Survey Form

Following is a snapshot of our survey results:

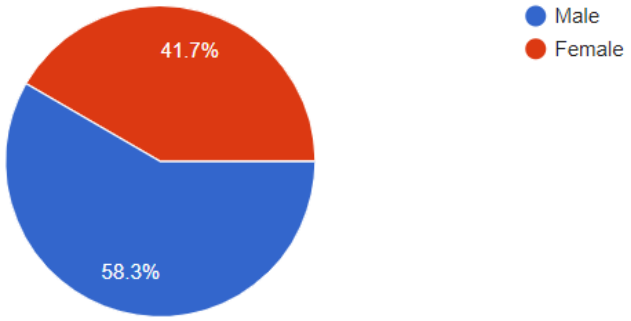
1. Age distribution

12 responses



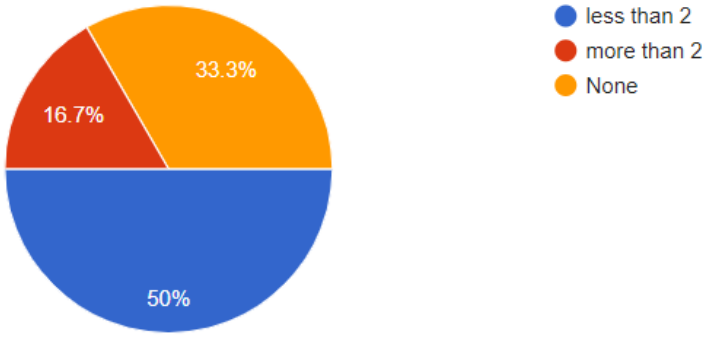
2. Gender Distribution

12 responses



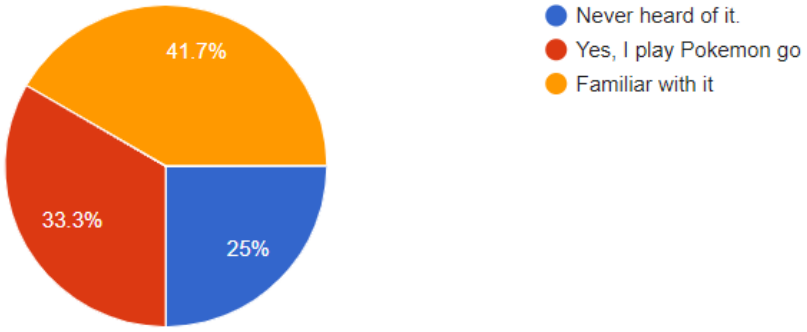
3. Fashion Show Exposure

12 responses



4. AR Exposure

12 responses



Lab Setup:

The next step was to conduct demos and the subsequent interviews to gain more insights.

1. We reserved a meeting room in the Hunt Library to conduct the interviews.
2. During the interviews, the participants were provided with an iPad to scan the pictures of the model from another iPad kept on the table, as shown in the picture below.
3. One of the interviewers was present in the room to greet the participants and also asking the participants to think aloud while they were trying to perform the tasks.
4. The other team members were not present in the lab but were listening to the interviews using Google Hangouts in another space to evaluate and understand how the participants are reacting while performing the tasks.

The above image shows the lab setup and one of scenes out of the many interviews we conducted. Look how the participant is performing task using the iPad and one of our interviewers is encouraging the participant to think aloud.

Interviews:

Process:

1. Ask users to complete a pre-screening survey to filter the target audience.
2. Request the filtered users to review the application.
3. Then the interviewer starts by introducing the Augmented Reality, and explaining the purpose of the interview.
4. Describe to user about the Application and it's aspects in Fashion Shows.
5. Allow user to use the application with no guidance and interference from the interviewer to make user more familiar with the application.
6. Ask user to complete certain tasks in a think-aloud manner.
7. Note all the activities of the user while user goes through the application and pay detailed attention to what he says.
8. Once user finishes the task ask them for feedback.

User Script:

1. Please try to **think out loud** during this process
2. Tap on the screen to interact with the application
3. Perform the task interviewer requests you to do using the application. Please note that there is no right or wrong way to do these task. You should mention what you are doing in a Think out Loud manner.
4. You can ask the interviewer any doubt you have at any point of time.
5. Remember that this is the evaluation of the application, not you.
6. Thank you for your time, we appreciate it.

Tasks:

The interviewer will ask the user to perform the following tasks

Task 1	First impression of the application.
Task 2	Impression about scanning the image of a designer using iPad.
Task 3	Move the iPad in different directions to see images and information (Text and behind the scenes images) for a particular designer.
Task 4	View through all the information of a particular designer in AR.
Task 5	Scan the designer's image from a distance.
Task 6	Scan images of different designers one by one.

Interviewer Script:

1. Interviewer greets the user and introduces himself/herself.
2. Ask user about how their day was and appreciate them for taking the time out for this evaluation
3. Ask user to interact with application.

Task-based script:

Task 1: Ask user if they can see camera screen and how do they feel about it ?
Task 2: Point the user iPad towards the second iPad with designers image. Note what they think about it.
Task 3,4: Ask user to move the user iPad around. Observe their response.
Task 5: Ask user to move away from the second iPad. Note what they see and say.
Task 6: Change picture on second iPad.
Repeat from task 2.

Observation Grid:

Functionality / Participant	Participant 1	Participant 2	Participant 3	Participant 4	Participant 5
Scanning Image	Image scanning was fairly efficient, image of the designer was visible was demonstrating results without much delay.	Scanning Module works very well and within a second, it shows the designer's info.	Camera took time to scan initially as user was not pointing the camera towards the image. But once the user aligned camera towards second ipad with image, the scanning was ideal.	After adjusting the iPad brightness, AR camera scanned the images efficiently. For the first transition, User tapped on screen and AR camera immediately recognized the image and showed AR with images.	After coming a little closer to display iPad, AR camera scanned the image properly. Transition between model images also happened without any major issue.
Augmented Information	Models name and the images of her designs were properly augmented with respect to the image. The image was taking a few seconds to stabilize. After stabilization, participant moved the ipad around and was able to see all the images the way it is expected to see.	As long as the focus of the camera is proper, images and information can be seen and the overall AR effect is good. Alignment of images is also very good and impressive.	User had to tap on the image to get the augmented results and move slightly back to see them clearly. User was able to see the name and then behind the scenes images of the designers in the image with no problem.	User saw all the images was very happy with the feel of AR. According to user, app was showing all the necessary information. User felt that the idea of AR is quite good and it helps to see different angles of fashion.	Once the AR kicked in, user was able to move the iPad around to see all the info displayed beside model. User seemed content with the smooth experience of moving the iPad around.
Application Performance while transition	When the image is switched and	Transition is very smooth and an image	The transition was smooth as per the	Once the user moved his Ipad	For the transition part user had to

	the participant keeps the camera pointed towards the second ipad, the transition time is close to zero and second result is immediately visible on participants screen.	of the designer is scanned very quickly. Once the image is identified, the app shows AR environment for other designers. Alignment for image for different designers is same.	user. But the second image again to time to stabilize for a few seconds.	towards the Ipad showing designers, AR app changed the AR environment quickly and showed information text and different images.	move closer to display iPad to scan the image. However, after that AR kicked in smoothly and user seemed content with how the information was displayed.

Results:

- Users found the initial opening screen to be basic and were not able to understand the Vuforia logo at the bottom left of the screen. But that limitation comes with free version of Vuforia.
- Users were fascinated by the Augmented images and text that were displayed after they scanned the image.
- All users reported the app to be functional, but faced some issues while focusing on the image on second ipad. These issues were very minor and were caused due to 2014 iPad version we were supposed to be used.

Future Scope / Follow Up:

- Scanning small images from larger distance than a room space.
- Adding more Augmented Objects and Animations
- Improving performance for different lighting conditions.
- Adding a “buy the design” functionality right from the app.

PROTOTYPE DEMO LINK:

Click here to see our iOS application is action.

Video in the link has a video demonstration of how our application works. It is a screen recording from the ipad where application is installed and includes actions similar to what our participants performed during this evaluation.