

Shopee Product & Design Challenge 2020

AR Product Filter

Team borahae 

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Introduction

The augmented reality (AR) market is expected to reach \$50 billion by 2024 ("20 Augmented Reality Statistics You Know in 2020", 2020) with brands such as IKEA, Nike and Apple incorporating AR into their eCommerce platform. With the growing trend of the AR market, and known brands such as IKEA, Nike and Apple will change Singaporeans consumers perception of AR.

Therefore, this proposal will involve the development of an AR Product Filter for consumers, a software to create the AR filters and server to publish their AR filters, and the addition of a new page for sellers to view their filter metrics.

Recommendation

1. AR Product Filter

63% of customers agree that AR would improve their shopping experience (Ross, n.d.). AR Product Filter is a new feature that will be developed so that consumers can visualise their item on themselves or their environment before purchase; imitating an in store experience in the comfort of the consumer's home. Since Shopee sells a range of products from clothes to furniture. The AR Product Filter will be limited to makeup, jewellery, shoes, clothing and furniture.

2. New Software and Server

To create a filter for Instagram Stories, the user will need to download Spark AR ("Spark AR", n.d.). The software provides templates, face and hand movement detection technology for the user. The completed filter will only be exported to Spark AR Hub which helps to publish and track the user AR filter throughout Facebook and Instagram ("Spark AR Features", n.d.). Therefore, for Shopee sellers to create their own AR filters, Shopee will need to develop a new software that is able to detect the:

- face for makeup
- hands for jewellery
- feet for shoes
- body for clothes
- environment for furnitures

Since the AR filter will be done on a computer, Shopee will need to invest in a server for sellers to upload their AR filters conveniently.

3. AR Product Metrics

For Instagram, the user tracks their AR filters through the Spark AR Hub. However, for the convenience of sellers, the data will be pulled from the server to the Shopee application. A new tab and section will be created to display the metrics from the user AR filters. This would allow sellers to view their AR metrics on the go.

Product Specification

AR Camera is a new feature onto the Shopee platform. It will enhance the experience of users and improve the sales experience for sellers.

Consumers will have a completely new buying experience as they use the AR camera to try on items sold on Shopee virtually. The AR camera can detect the overall body and face. It also scans the expanse of a room through a mobile camera. Therefore the user will be able to visualise makeup, jewellery, shoes and clothes and furniture using their phone before their purchase. For products with different colours, options will be given to the user to choose while using the AR camera.

Sellers can monitor their AR statistics through an improved business insights page. A new tab for AR will be added to Product Ranking. It will list the top 5 popular AR filters the Shopee sellers have created according to the number of views. A new section below Product Ranking will be created. This section allows the seller to choose a product to view the number of views and consumers that viewed the AR and made a purchase. This will allow sellers to have an overview of how responsive their AR is among consumers. Sellers can also analyse which AR have a proportional result on their sales. These metrics give sellers a good idea of the current performance of their online stores.

Benefits

1. Simplify decision making

45% of consumers asserted that AR simplifies decision making (Ross, n.d.). For example, if a consumer has trouble deciding which colour to purchase. 77% of customers prefer to use AR capabilities to preview product variations such as colour (Ross, n.d.). Using AR Product Filter, she can simply point her smartphone camera to a mirror and visualise how the shirt looks on her. Thereafter, she can swipe through the colours to decide which colour suits her best. Hence, reducing the time taken to make a decision (Strohanova, n.d.).

2. Increase seller's selling opportunities

With the AR Product Filter, Shopee sellers have an additional platform to market their products. Currently, Shopee sellers can advertise their products to consumers through pictures and videos, but with the AR Product Filter, consumers can virtually try the products and shorten the decision making process. Moreover, 78% of consumers who are familiar with AR prefer AR experiences over video content (Ross, n.d.). This shows that AR experience convinces consumers more than video content. Therefore, increase sales for sellers as a result attracting more seller's to the Shopee platform.

3. Lower return rates

By allowing consumers to visualise products before purchasing, sellers can minimize the risk of returned purchases as customers make a more informed decision. This would lead to higher customer satisfaction and lower return rates, creating an attractive market for sellers to join.

Feasibility

Technology to detect face and body

AR Foundation allows one to work with AR platforms in a multi-platform way within Unity (“About AR Foundation”, n.d.). To use AR Foundation on a target device, separate packages (officially supported by Unity) needs to be added such as:

- ARCore XR Plugin on Android
- ARKit XR Plugin on iOS

(“About AR Foundation”, n.d.)

Google ARCore allows developers to build new augmented reality on Android, Unity, Unreal and iOS (“ARCore”, n.d.). It can be used to detect faces for instance Augmented faces where one can overlay assets over facial features (“Augmented Faces”, n.d.). Social media platforms such as Instagram, Facebook and Snapchat have incorporated face detection technology to create AR filters for consumers use.

AR Foundation is a set of MonoBehaviours and APIs for dealing with devices like ARKit that supports body tracking - 2D and 3D representations of humans recognized in physical space (“About AR Foundation”, n.d.).

Technology to detect hands

Alchera’s Unity SDK is able to detect 2D and 3D hand skeleton recognition for iOS, Android, Windows and MacOS (“Alchera’s AR technology”, n.d.). Its AR technology has aided the launch of SNOW Camera, one of the most successful consumer applications in Asia (“Alchera’s AR technology”, n.d.).

Technology to detect feet

Vyking 3D foot tracking technology is able to track human feet for AR applications, and it works on any smartphone (“AR Try-on Technology For Footwear”, n.d.). JD.com (Achim, 2020) and Converse (Dawson, 2018) has launched an AR feature that lets consumers try-on footwear virtually.

Technology to detect the environment

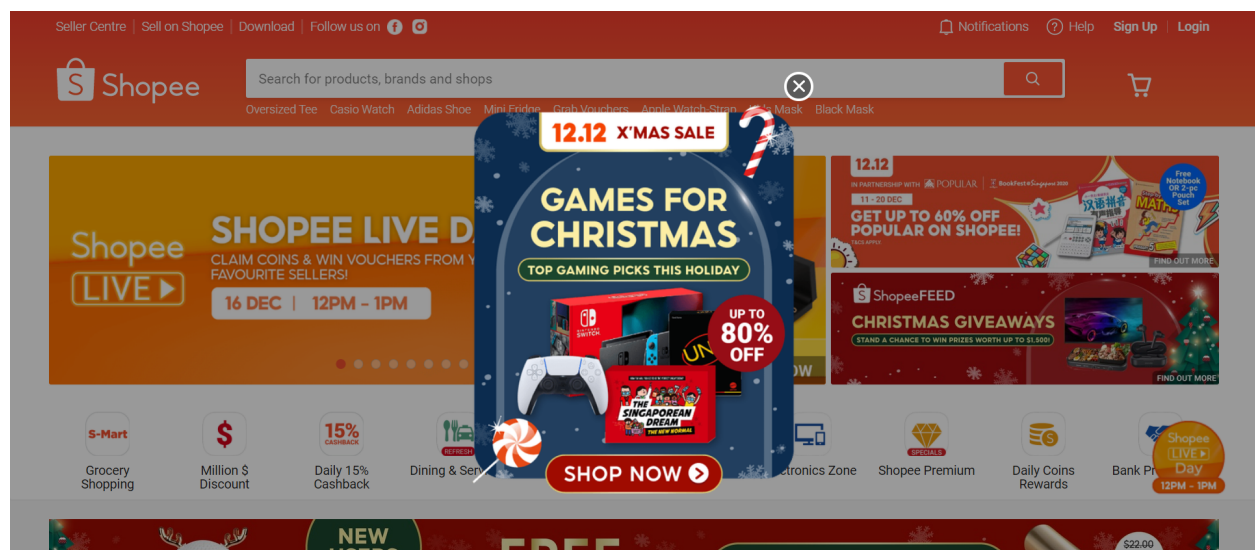
Shopify AR provides an accessible toolkit for merchants to create their own AR experiences into their own Shopify eCommerce platform (“Shopify AR powered by 3D Warehouse”, n.d.). The 3D Warehouse application allows sellers to upload 3D models like table lamps and link them to the seller’s products for an AR experience (“Shopify AR powered by 3D Warehouse”, n.d.). Shopify AR Quick Look allows consumers who use the Safari browsers on iOS 12 devices on Shopify AR to view realistic and interactive versions of the products in AR (“Shopify AR powered by 3D Warehouse”, n.d.). Similarly, IKEA has an AR application that allows users to test their products in real time through Apple iOS 11’s ARKit technology (Ayoubi, 2017). IKEA has revamped their application using Google ARCore so that it can run on Android devices (Moon, 2018).

Risk Analysis

A possible shortfall is that both sellers and consumers do not use the AR Product camera feature because they do not know such a feature exists and they lack knowledge of this technology. Therefore, this proposal suggests two ways to counter these issues.

1. Pop-up advertisement

To advertise the new AR Product Filter, Shopee can use the Infographic (refer to Appendix B) to let both customers and sellers know when they open the Shopee application firsthand. Incentives can be given to encourage sellers to create the AR Product Feature. For example, shops who create AR Product Filter can be featured on the banner, giving sellers more sales opportunities as it will appear on the homepage where interested consumers can click to browse through the products.



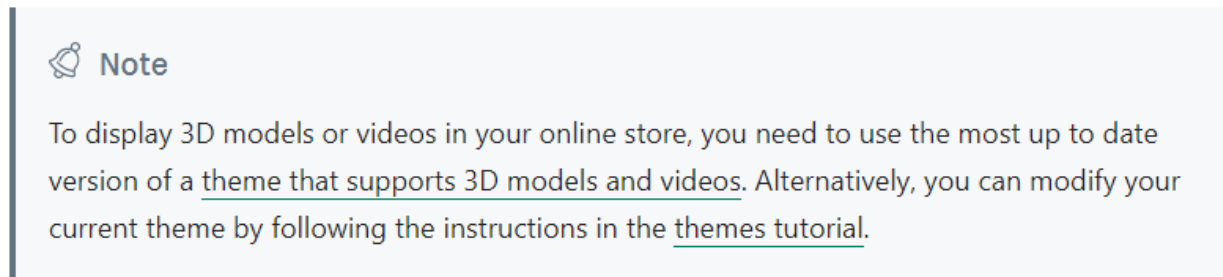
Pop-up advertisement



Banner

2. Video and Helpdesk

Shopee can create a video tutorial so that sellers who do not know how to create an AR product filter can refer. For instance Shopify has tutorials in the Help Center to guide users.



Product Media with a note in Shopify Help Center ("Product media", n.d.)

Shopee may also create a helpdesk - a team which is familiar with the AR technology i.e. well versed in both technology and design. They will be responsible for solving sellers and consumers enquiries. With a helpdesk, this will give assurance and assistance to sellers who are struggling with the feature and consumers who have problems with the feature.

Another possible shortfall is that consumers will not use the AR filters. However, social media platforms like Instagram and Snapchat have incorporated AR filters in their application where half a million Singaporeans use Snapchat and more than 2 million use Instagram (Koh, 2020). Additionally, 86.6% of instagrammers post on Instagram stories (99 Firms, n.d.). Moreover, 85% of users who use instagram in Singapore are aged below 45 years old (Koh, 2020) also does online shopping (Lim, 2019). Therefore, Singaporeans consumers who do online shopping are familiar with AR technology and will most likely use the AR filters on Shopee.

Business Model

Description

Shopee is an online ecommerce platform which allow users to sell or buy products.

Objectives

- Enhance customer's online experience
- Create an attractive market for sellers to join
- Attract more sellers to join Shopee

Targets

Sellers and consumers aged below 45

Targets Challenges

- (Seller) Specifications confusion to customer
- (Customer) Not being able to try products

Our Solution

AR Product Filter allows consumers can virtually try the product. AR Product Metrics allow sellers to track their AR metrics.

Our Value

#1 ecommerce platform to provide AR feature among popular sites like Qoo10, Lazada and EZBuy (Statista, 2020).

Our Pricing

Free for both sellers and consumers. However, Shopee will need to develop a software.

Solution to target's pain points

Customer can make an informed decision by virtually seeing how the product look prior their purchase. Reducing return rates and increase customer satisfaction as customer can check the specifications using the AR product filter.

Promote/ Reach out to target

- Shopee Homepage e.g. popup advertisement/ banner
- Social Media

Investment Required (Estimated)

- Develop software to create AR cost – \$2500 (Horton, 2020)
- Server cost – \$2500 (Horton, 2020)
- Operating cost - \$971.57/ month ("Cost of server ownership", 2019)

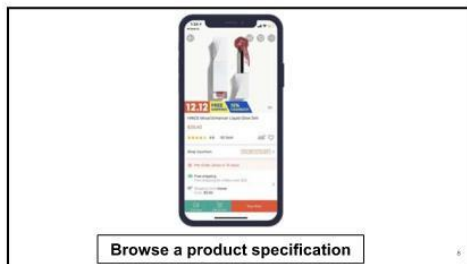
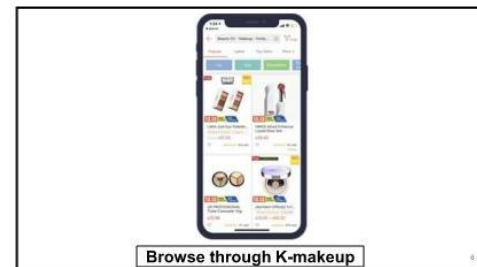
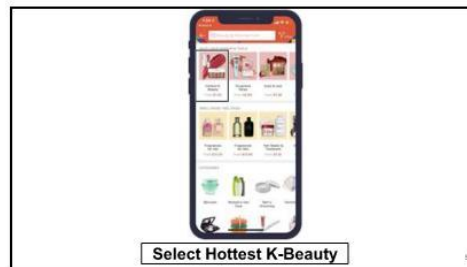
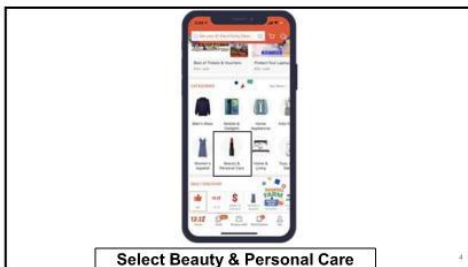
Growth Opportunity

- Remain the #1 position in Singapore
- Expand AR product filter to other Shopee platforms

User Journey

Refer to the link for a clearer picture:

<https://docs.google.com/presentation/d/1Wnx-DPwrN6AiU1qJARkXva5PpXccVUqQd1nie0JNR-M/edit?usp=sharing>





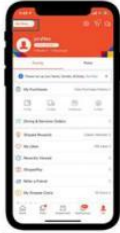
Scenario: Seller wants to check how his makeup AR fairs among shoppers



Seller opens Shopee app



Seller selects Me



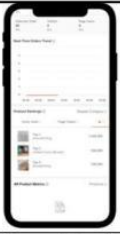
Seller selects My Shop



Seller selects Business Insights



Seller scrolls to Product Ranking and scrolls the tab left to select AR



Seller scrolls through top 5 AR Products



Seller realise that lip product (HINCE Mood Enhancer Liquid Glow 5ml) did not end up in Top 5



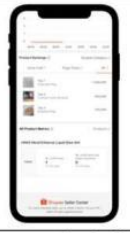
Seller scrolls to AR Product Metrics and selects Products



Seller view a list of products



Seller selects HINCE lip product



Seller views metrics for lip product

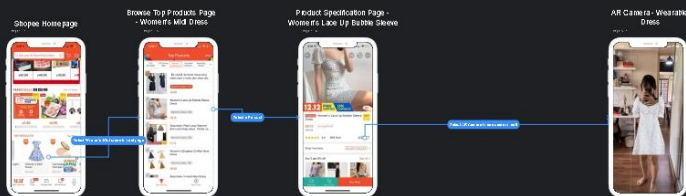
Design Mockups (Refer to design mockup file)

Workflows

Consumer - AR Camera

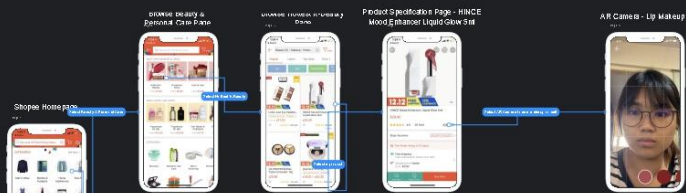
Wardrobe Trying

Flow 1 - Try product from Top Products



Flow 2 - Try a product from Categories

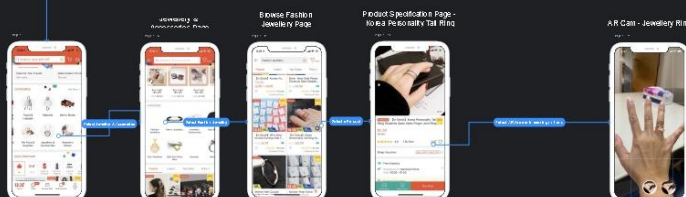
Makeup Trying



Interior Trying

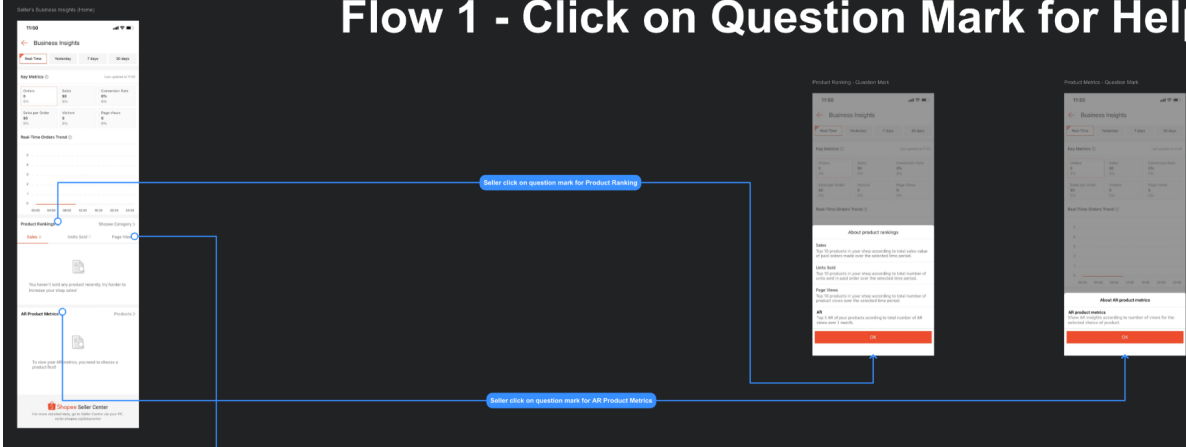


Jewelry Trying

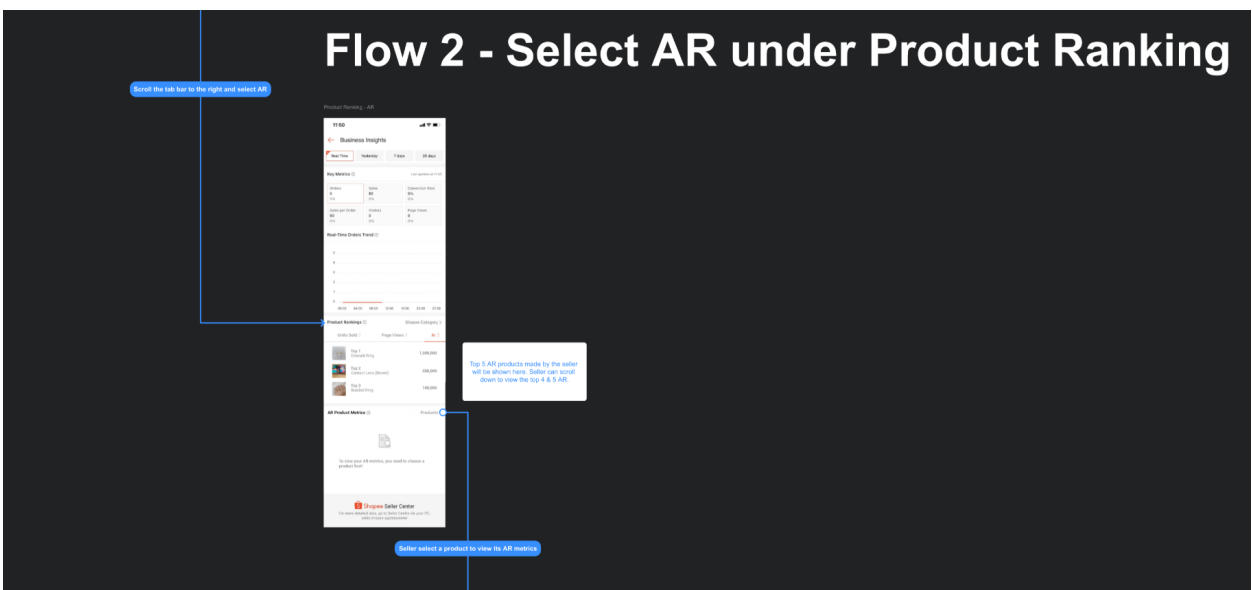


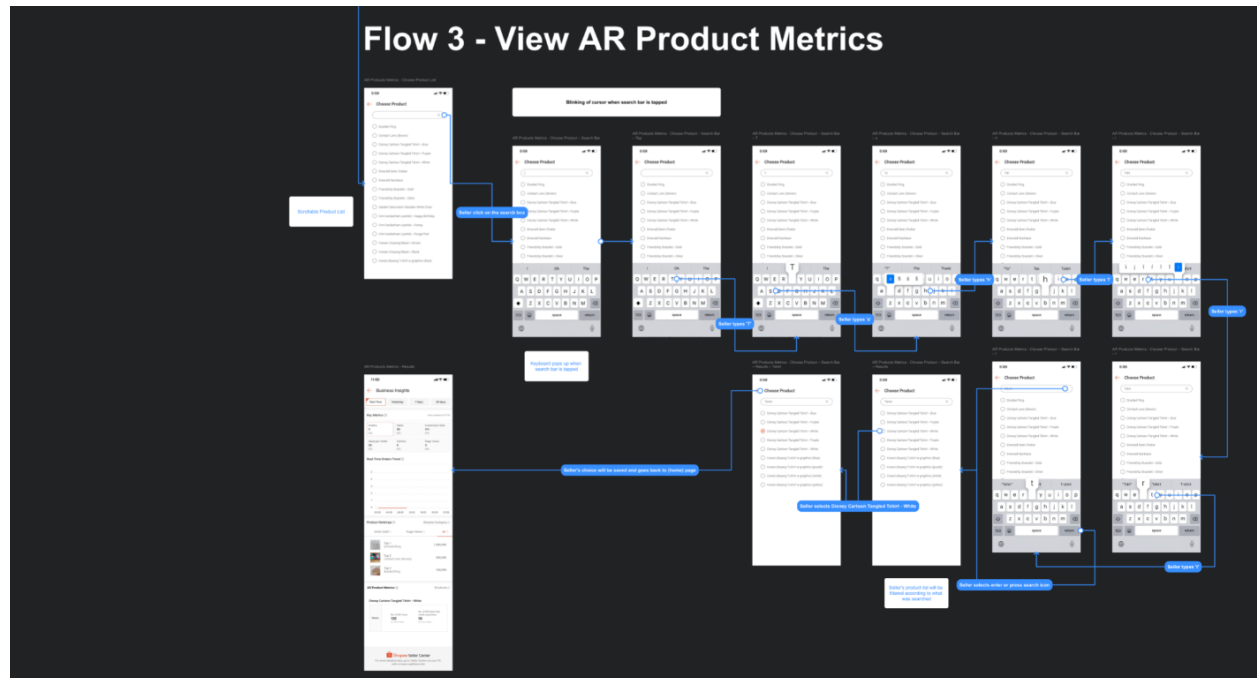
Seller - AR Metrics

Flow 1 - Click on Question Mark for Help



Flow 2 - Select AR under Product Ranking





Refer to the link for a clearer picture:

<https://drive.google.com/drive/folders/132JYqe2hDvJQy-fsaGqVcZ4vfXJxUNfn?usp=sharing>

Prototype

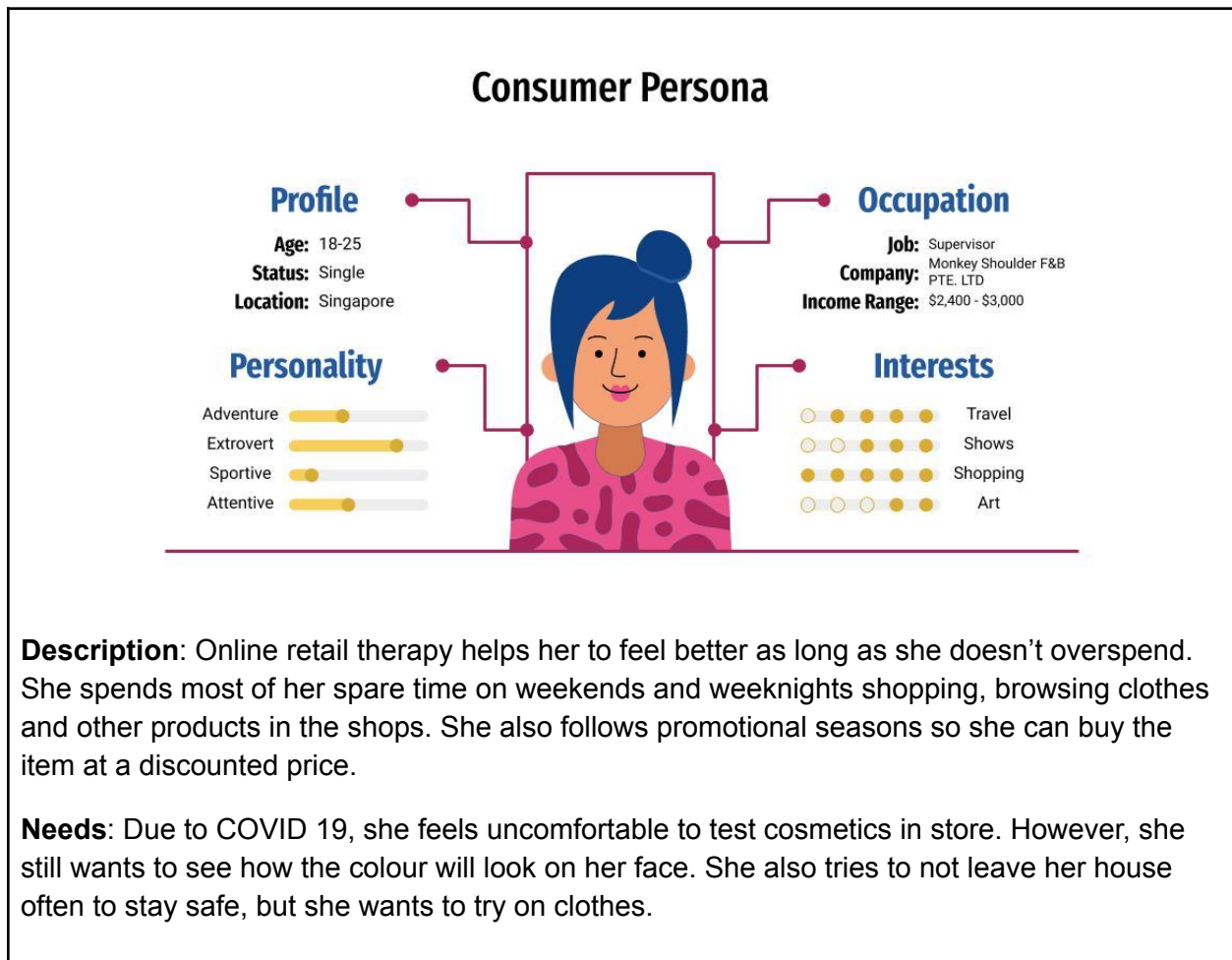
Consumer's experience with AR Camera:

<https://xd.adobe.com/view/21dcea78-ed9d-43ec-8ad4-b4049ae44769-748f/?fullscreen>

Seller's experience viewing their AR metrics under Business Insights:

<https://xd.adobe.com/view/d76c556a-b1f4-463d-a6c0-ccf5aab9d2e1-823f/?fullscreen>

Appendix A - Persona



Seller Persona



? Profile

Age	30 years old
Studies	Economy
Job	Entrepreneur
Salary	\$2500-\$3500
Location	Singapore

\$ Earn

100% Online

Goals & Needs

- Easy to use & intuitive online store
- Sells more orders
- Give good customer experience

Frustrations

- Poor sales
- Specification confusion to customers

Description: He describes himself as an “Entrepreneur”. He has set up a Shopee store to sell his products online. Some customers have made a purchase at his store.

Needs: He may need IT help when facing difficulties. He wants assurance from Shopee that they can increase his customer base. Boost customer sales orders.

Appendix B - Infographic



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