Fashion Redefined with Virtual Grooming & Shopping Assistant

Geneal Description

Our Virtual Assistant "Elsa" is designed specially for Fashinova people. The Industry Has always been Very lucrative for shoppers and there has been immense growth in usage of these Fashion mobile stores so we have created a virtual fashion assistant to help choose people what's best for them.

Personally Specialized for everyone with its unique AR/VR, Machine Learning and several advancement technologies and its privacy policy. The best tool to get complex big data analytics that aid in cost optimization, inventory management and make informed decisions for the buisness.

Novelty / Uniqueness:

- Good Categorization & Cataloging Users should be able to categorize their outfits their outfits for every day, based on events, etc. Catalog features where outfits can be referred back by storing them in a library.
- **Personalized User Experience** our Virtual Assistant Personalize Experience Based on User's Choice. It can also help and Navigate Depending on clients history, body(if info provided). It can also give you Fashion Experts advice about your Fashion Wardrobe.
- Picture and Album Management- Allows users to add screenshot, upload album. Users are allowed to import photos directly from their phones and allow users to remove background
- **Better Privacy Policy**-Keeps User's Data Privacy and follow best Privacy Policy

Business / Social Impact:

Ecommerce has been flourishing and has seen a steady rise. The Fashion and Apparel Industry Report stated the revenue generated by the ecommerce fashion industry is expected to grow to \$712.9 billion dollars.

Take a look at the expected CAGR of the industry between 2017 to 2020 in three different countries

- 14.1 % in China
- 8.8% in the U.S
- 8.7 in the Europe

it is estimated to be 14.4% from 2018 to 2023 in India Besides saving time, hiring a virtual assistant will also help you save lot of money.

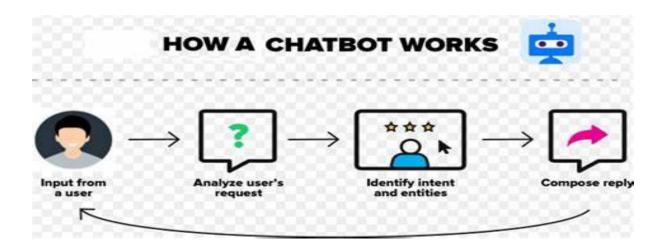
In the U.S, the avg annual salary of a virtual assistant is \$37,023 which is considerably less compared to hiring a full time employee. we will require Capital Resource and Material Resource.

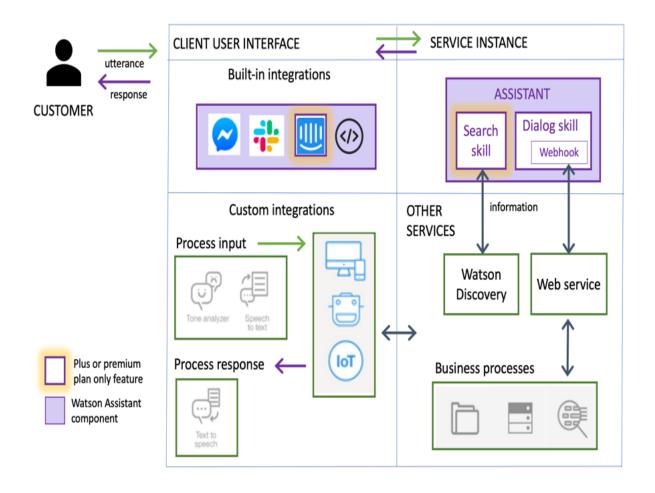
1.1 Existing problem:

There are many online fashion applications are available. However, none of them has the filter, where module recommends according to the physical appearance. Existing systems do not provide personalized recommendations. This may result in waste of time.

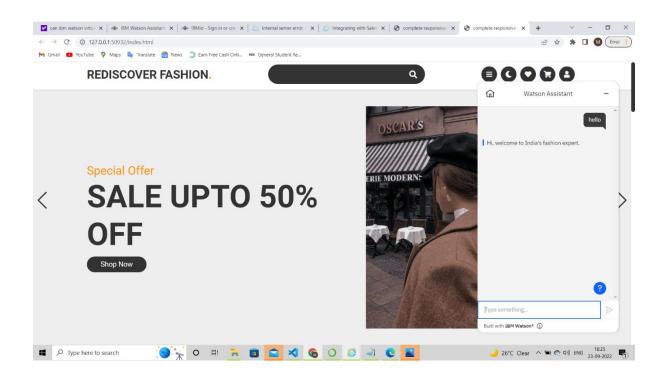
1.2 <u>Proposed solution:</u>

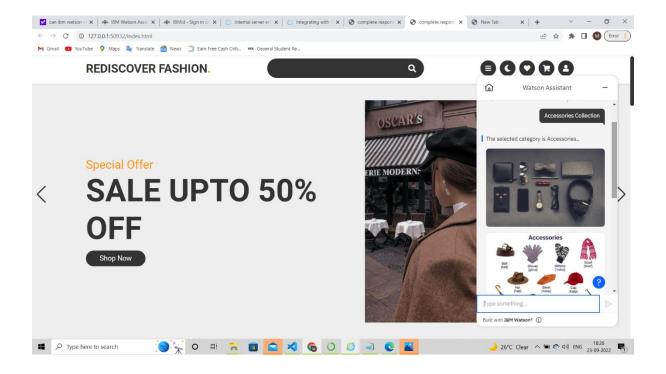
To overcome the existing problem, the project team has come up with an innovative solution where the system asks some basic informative questions using IBM assistants such as regarding their gender, event details, age group, and any size group. The system will take an image and analyze their skin tone and after processing this data together it recommends the outfits which probably satisfy the user's need.

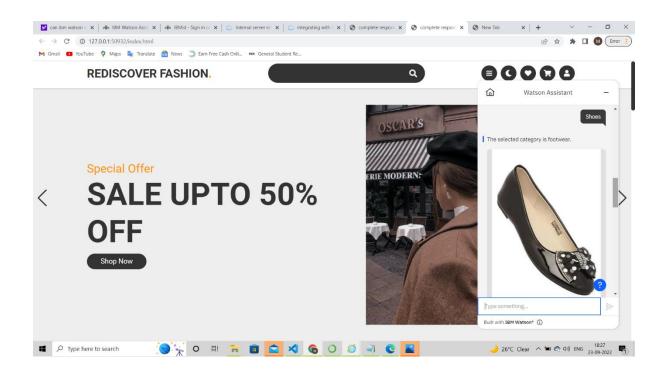


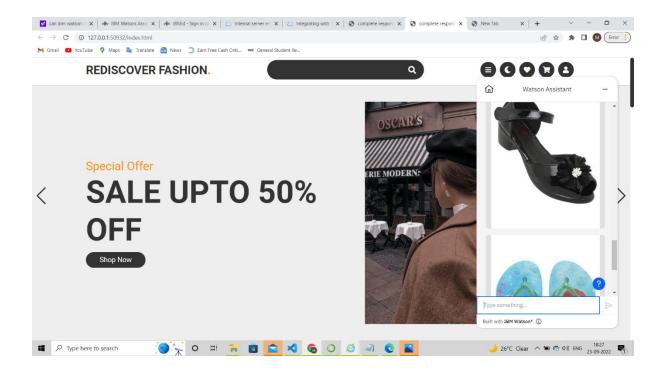


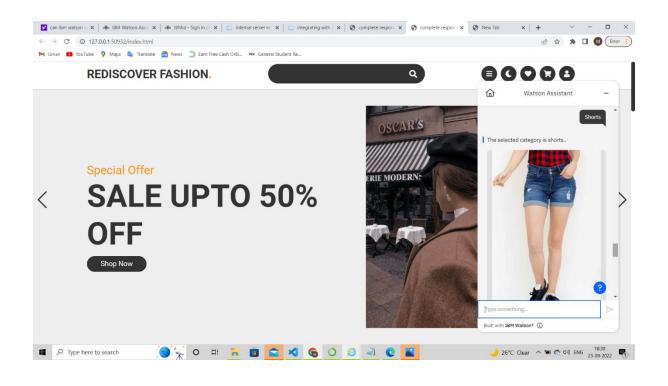
RESULTS

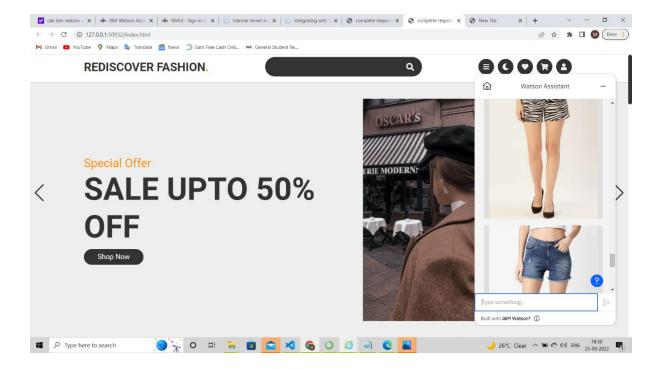


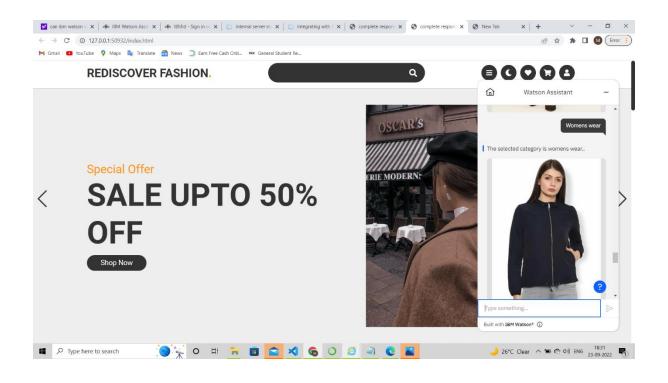


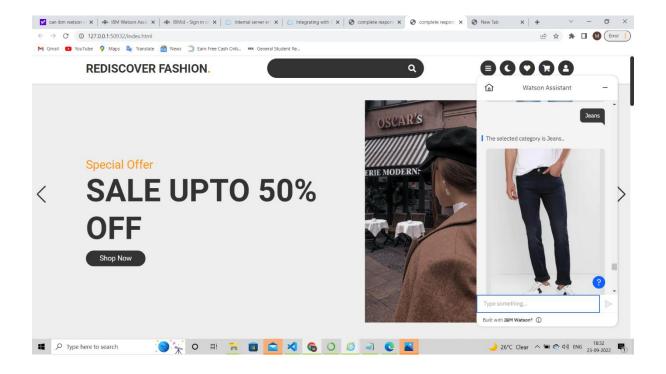


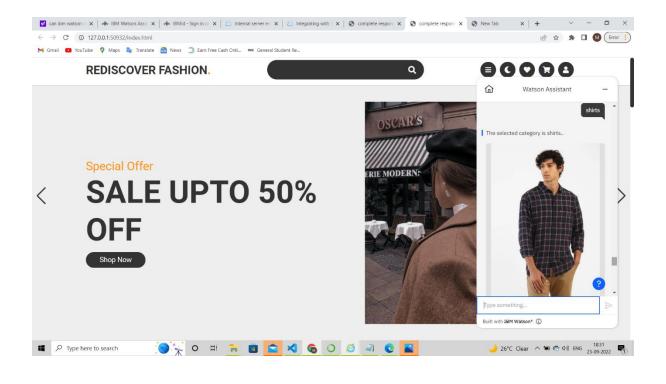


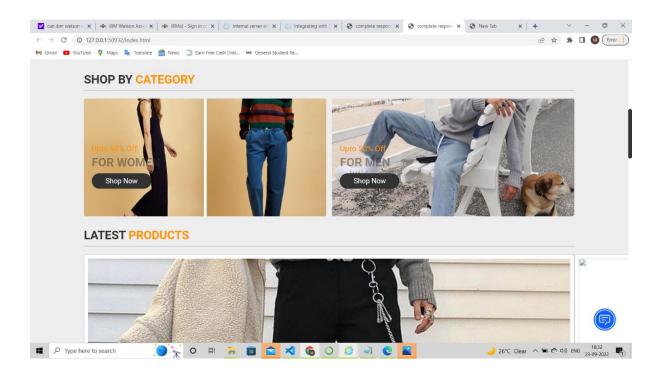












Technology Architecture:

It is a bot Development . A chatbot development for the user to communicate properly . the Technologies used are:

- Python
- Flask Docker
- IBM Watson
- IBM Cloud Service
- Visual Recognition
- Jupyter Notebook

Applications

1. Wide variety of choices -

There is a large variety of outfit recommendations stored in the system according to different conditions, physical appearances, and event details. The module will always give a different variety of outfits that most probably reach the user's need.

2. Multiple Object Recognition-

Based on the problem that we are trying to solve, having a multiobject recognition technology is inevitable. It is very unlikely that user would use an image showing only a single object to perform search.

10. Scope

The scope of the project is to come up with a virtual shopping assistant having image recognition capabilities. Existing systems have only text and speech recognition capabilities for product search. However, they do not have image based search functionality. Hence, this project will focus on image recognition to offer users with a powerful and seamless search capability to search for various kinds of items on e-commerce websites using just images. As far as the current scope is concerned, we target Shopstyle as an e-commerce platform due to its availability since it is open source. Moving forward, we plan to integrate other e-commerce platforms like Amazon, eBay, etc.

APPENDIX

```
<script src="https://unpkg.com/swiper/swiper-bundle.min.js"></script>
<script src="js/script.js"></script>
</body>
<script>
   window.watsonAssistantChatOptions = {
       integrationID: "bab6bbae-ff5d-4127-a0bc-5cf329c9a2d4", // The ID of this integration
       region: "eu-gb", // The region your integration is hosted in.
        serviceInstanceID: "78e0d3d3-322e-46c5-bf93-77f44e011e4f", // The ID of your service
       onLoad: function(instance) { instance.render(); }
     };
   setTimeout(function(){
     const t=document.createElement('script');
      t.src="https://web-chat.global.assistant.watson.appdomain.cloud/loadWatsonAssistantCha
     document.head.appendChild(t);
   });
 </script>
</html>
```

```
app = Flask(__name__)
10
11
     model = load_model("fashionmodels.h5")
12
     @app.route('/')
13
     def index():
14
15
         return render_template('index.html')
16
     @app.route('/predict',methods = ['GET','POST'])
18
     def upload():
19
         if request.method == 'POST':
20
             f = request.files['image']
             print("current path")
22
             basepath = os.path.dirname(__file__)
23
             print("current path", basepath)
24
             filepath = os.path.join(basepath,'uploads',f.filename)
             print("upload folder is ", filepath)
25
             f.save(filepath)
26
27
             img = image.load_img(filepath,target_size = (64,64))
28
29
             x = image.img_to_array(img)
30
             print(x)
             x = np.expand_dims(x,axis =0)
31
             print(x)
32
33
             preds = model.predict_classes(x)
```