Problem Statement Title:
Conversational fashion Outfit Generator powered by GenAI

Team Name: **686157-U37OAU73**

TEAM MEMBERS

Team Name	686157-U37OAU73		
Institute Name/Names	BVRIT Hyderabad College of Engineering for Women		
Team Members >	**1 (Leader)**	**2**	**3**
Name	G. Sravika	P. Shivani	A. Harshitha
Batch	Software Development Track	Software Development Track	Software Development Track

IDEA:

- Our main idea is to use new AI tools to develop this project.
- We have made a AI chatbot using Stable diffusion.
- It is a latent text-to-image generator.
- The input has been taken in the form of prompt templates.

CODE SUBMISSION:

GitHub link:
https://github.com/21wh1a0501/FlipkartGrid

USE-CASES

The model is trained to generate images based on the prompt given.

P0: Firstly the user data gets collected.

P1: Generation of images is prioritized based on age, gender and occasion.

P2: Next chatbot asks the user about his/her requirement for the outfit. It generates images based on the given input

P3: In the next step, chatbot asks user if any accessories are required. Based on the choice of user from the listed accessories, it generates an output of that accessory.

SOLUTION STATEMENT / PROPOSED APPROACH:

The problem has been divided into 3 parts:

1. Collecting the data set related to the problem statement
2. In the development of model:
    a. Collecting the user information(past preferences, user info)
    b. Taking input related to the occasion(formal/casual/festive/vacation etc..)
    c. Generating the outfit based on the desired condition
3. Regeneration of images if not satisfied by the user

1. Data set:

- The data set has been collected based on the problem statement.
- Required modifications are done such as adding columns to data set such as gender, accessories, article type, category.
- Different parameters are taken into consideration based on past preferences and fashion ratings.

2. Development of model :

- The model is developed by using the AI technology STABLE DIFFUSION.
- The input given by user is taken in the from of pattern by creating a customized prompt template.
- Based on the input, the outfit gets generated.
- It also generates the accessories.

3. Regeneration of outfit based on choices:

- If the generated accessories or the outfit didn’t match with the requirements of user, the model should be able to regenerate the images.

```
Chatbot: Hello!
Chatbot: what's your name?
You: karthik
Chatbot: Nice to meet you, karthik! How old are you?
You: 25
Chatbot: Got it! What's your gender?
You: male
Chatbot: Thank you! Where are you located?
You: bengaluru
Chatbot: Pick any of the style to genarate outfit.
Formal
Diwali
Onam
Navaratri
Ramzan
KarvaChauth
Holi
Children
You: formal
100% 50/50 [00:25<00:00, 1.96it/s]
```

Here, it shows the conversation between the user and chatbot.

- → It takes user's data as input
- → Asks for an occasion
- → User can enter any occasion not only the listed ones
- → It generates the images.

In the next step it asks for the review of the generated outfit.

It asks if any accessories are required and generates any type of accessories not just mentioned in the list.

LIMITATIONS

- The model is unable to render intelligible text.
- It struggles with increasing challenging tasks including compositionality.
- The model's autoencoding component is lossy.
- More prompt templates must be added so that AI conversation doesn't get into wrong way.
- The model is unable to generate images unless input is according to the prompt that is fixed.
- The model is unable to regenerate the images if the requirements of the user are not met .

FUTURE SCOPE

- The extension to the model will be developed.
- As of now, the model is not completely built as per the complete requirements of problem statement.
- 70% of the model is built (gathers information, generates images).
- The remaining 30% (as per our considerations) is about the image regeneration and fashion rating consideration.
- That part can be developed to increase the efficient usage of the model, then it completely turns out into an AI MODEL.


Flipkart
GRiD
5.0
Thank You