 Marwadi University	Marwadi University Faculty of Technology Department of Information and Communication Technology	
Subject: Capstone Project	Ideation and stakeholder need analysis - Intermediate Review	
	Date: 24/09/2025	Enrolment No: 92200133001

Team Member:

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Problem Statement:

Tailors, shoppers and especially in the fashion and tailoring domains, face difficulties in visualizing how a garment will look on their own body before purchase or stitching. This results in high product return rates, customer dissatisfaction, and inefficiencies in tailoring processes due to miscommunication about design, fit, or fabric. Existing virtual try-on solutions are expensive, or fail to handle complexities such as varied body measurements, fabric textures, and occlusions like hair overlapping clothing.

Virtual try-on system that leverages **computer vision, pose estimation, and segmentation techniques** to realistically overlay garments on a user's image while addressing accuracy, usability, and scalability.

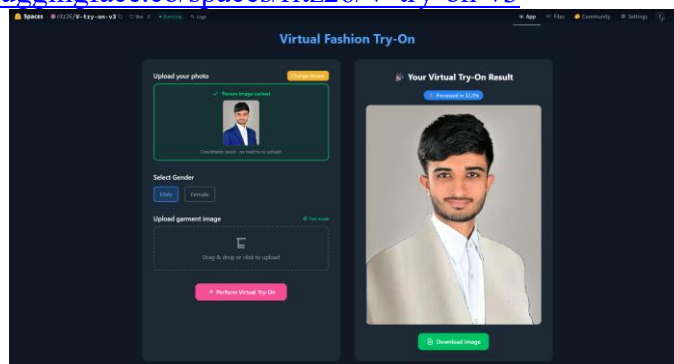
Problem faced during deployment:


- During deployment, I initially tried hosting the system on Render. While the application was successfully deployed, Each try-on request required around 1500 MB of RAM, whereas the free Render plan only provides 500 MB, So As a result, every time I attempted to run the model, the service would crash and automatically restart, making it unusable.
- Next, I tried to deploy the solution on Hugging Face using Docker. At the starting, I faced a CORS error, which will prevented the frontend from communicating properly with the backend with model. After troubleshooting and fixing the CORS configuration, the system started running smoothly on Hugging Face.
- To improve response time, I also experimented with caching built-in models so they wouldn't download on every request. However, this increased the memory to nearly 3 GB of RAM, which is not feasible on free hosting services. Therefore, I decided to run the system without caching to balance resource requirements with accessibility.

Hugging Face Links:

Virtual Try On V2:- https://huggingface.co/spaces/ritz26/CP_Project

Virtual Try On V3:- <https://huggingface.co/spaces/ritz26/V-try-on-v3>



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Evidence (Logs):

```
All the weights of SamModel were initialized from the model checkpoint at Zigeng/SlimSAM-uniform-50.
If your task is similar to the task the model of the checkpoint was trained on, you can already use SamModel for predictions without further training.
Fetching 1 files:  0%|          | 0/1 [00:00<?, ?it/s]
Fetching 1 files: 100%|██████| 1/1 [00:00<00:00, 8050.49it/s]
loading configuration file preprocessor_config.json from cache at /tmp/.cache/models--Zigeng--SlimSAM-uniform-50/snapshots/d67c795ed0caec7423d799da25cdeded48aac40/preprocessor_config.json
Image processor SamImageProcessor {
  "do_convert_rgb": true,
  "do_normalize": true,
  "do_pad": true,
  "do_rescale": true,
  "do_resize": true,
  "image_mean": [
    0.485,
    0.456,
    0.406
  ],
  "image_processor_type": "SamImageProcessor",
  "image_std": [
    0.229,
    0.224,
    0.225
  ],
  "mask_pad_size": {
    "height": 256,
    "width": 256
  },
  "mask_size": {
    "longest_edge": 256
  },
  "pad_size": {
    "height": 1024,
    "width": 1024
  },
  "processor_class": "SamProcessor",
  "resample": 2,
```

```
[INFO] Model and processor loaded successfully on CPU!
[INFO] Saved new person image to /tmp/uploads/person.jpg
[INFO] Cached person coordinates: {'left_shoulder': (616, 255), 'right_shoulder': (417, 227)}
[INFO] Saved garment image to /tmp/uploads/tshirt.png
[INFO] Result saved to /tmp/outputs/result.jpg
[DEBUG] File saved successfully, size: 89642 bytes
[PERF] Total processing time: 95.82s
[INFO] Incoming request: GET /uploads/person.jpg
[INFO] Incoming request: GET /outputs/result_dae88c4c.jpg
[DEBUG] Serving file: result_dae88c4c.jpg from /tmp/outputs
[DEBUG] File exists, serving: /tmp/outputs/result_dae88c4c.jpg
[INFO] Incoming request: GET /
[INFO] Handling GET on /
[INFO] Incoming request: GET /
[INFO] Handling GET on /
[INFO] Incoming request: GET /
[INFO] Handling GET on /
[INFO] Incoming request: GET /
[INFO] Handling GET on /
[INFO] Incoming request: GET /
[INFO] Handling GET on /
[INFO] Incoming request: GET /
[INFO] Handling GET on /
[INFO] Incoming request: GET /
[INFO] Handling GET on /
[INFO] Incoming request: GET /
[INFO] Handling GET on /
[INFO] Incoming request: POST /
[INFO] Handling POST on /
[INFO] Using device: cpu
[INFO] Loading SAM model and processor...
loading configuration file processor_config.json from cache at None
Processor SamProcessor:
- image_processor: SamImageProcessor {
  "do_convert_rgb": true,
  "do_normalize": true,
  "do_pad": true,
  "do_rescale": true,
  "do_resize": true,
  "image_mean": [
    0.485,
```