Team Name: Outfit.AI

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Abstract:

Online mode of shopping offers the convenience of shopping from the comfort of one's home with varieties to see on fingertip . However, online shopping does not enable physical try-on, thereby limiting customer understanding of how a garment will actually look on them,this critical limitation can be overcomed by the development of virtual fitting rooms in malls, where images of a customer wearing selected garments are generated synthetically (Using AI) to help compare and choose the most desired look.

(**Due to privacy concern of users , developing this as a mobile application may not be possible, so it will be available in malls/stores)

Introduction:

A Computer Vision model can be designed to help visualize how clothing items in reference photos might look on an image of a person. It can be trained on a single picture using a generative adversarial network (GANs), a type of model with a component called a discriminator that learns to distinguish generated items from real images.

In preprocessing, established techniques segment the input images and compute the query person's body model, representing their pose and shape. The segments selected for inclusion in the final image pass to the shape generation model, which combines them with the body model and updates the query image's shape representation. This shape

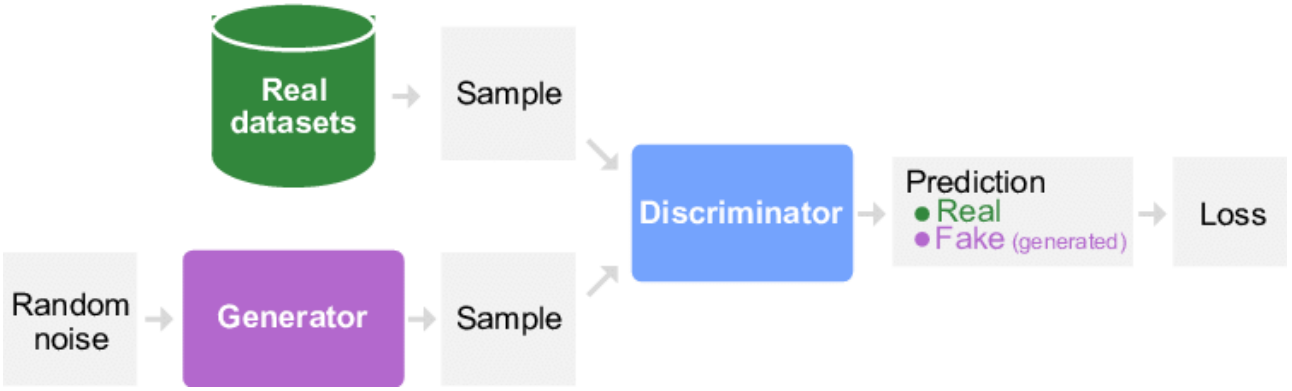
representation will move to a second model that encodes information about texture and color, producing a representation that's combined with the shape representation to create a photo of the person wearing the garments.

Motivation :

The motivation is to add value to an existing market ecosystem so that we can extract maximum out of recent technology and help the fashion industry grow in a much faster way.

The field of AI has much more to offer due to the depth it has, particularly the field of Computer Vision needs much of our attention as because of the increase in availability of computational power, we can convert the innovative thoughts into real world techs which people always thought of doing .

Methodology :



GANs overview image

Social Impact

- It will save customer's time .
- Less social contacts will be maintained.
- It can be helpful to store owners in maintaining data which they will be getting about- what types of cloth do people add on the cart to try on but end up rejecting that cloth .
- Innovative addition can help stores/malls (who use this technology) in branding and can be an attractive element for customers to buy a product from that store.
- This idea has scalability due to existing malls/shop in the market.
- If it becomes a success then it may become a reason for students to explore this field and attract them to invest their time in research and development.

Market Survey :

As this kind of feature will be new in the market so it has a potential to attract masses specially in India because of the variety we get here in terms of culture as well as the cloth material.

As there is surge in demand for buying Made in India materials and buying things from local shops , an innovative add on like this can boost the market reach of local shops and help them compete online market.