Hack Elite

Theme 2

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Problem Statement

- The biggest challenge faced by any customers in a E-commerce shopping is of proper fitting and this forces many customers to shift to offline shops.
- Poor fitting also results in large volume of returns, unnecessary extra shipping charges on the returnable product and ultimately costs to the company.
- Many customers face difficulty to choose their body size using the given brand size chart, leads to loss of confidence of customer to purchase the product.
- Inconsistency in the size charts across different brands.

Proposed Solution

- Build a virtual trial room for online shopping at Myntra.It enables shoppers to try on clothes to check one or more of size, fit or style virtually. Makes the customer confident to purchase.
- To build a standardize size chart for the customer. It will save time of the customer to quickly choose his/her size.
- Calculating body measurements using user data and image of the person thus recommending the appropriate size.

Solution deep-dive

- Build a application of virtual trial room. Customer will upload his/her full front,side and back picture and the application will show the 2D virtual image of the customer wearing the outfit.

- The application will also give the most suitable body size of the outfit to the customer using the user data and pictures, this make it time saving and confident purchase.

- Core components are virtual trial room, standardize body size chart, size recommendation window.

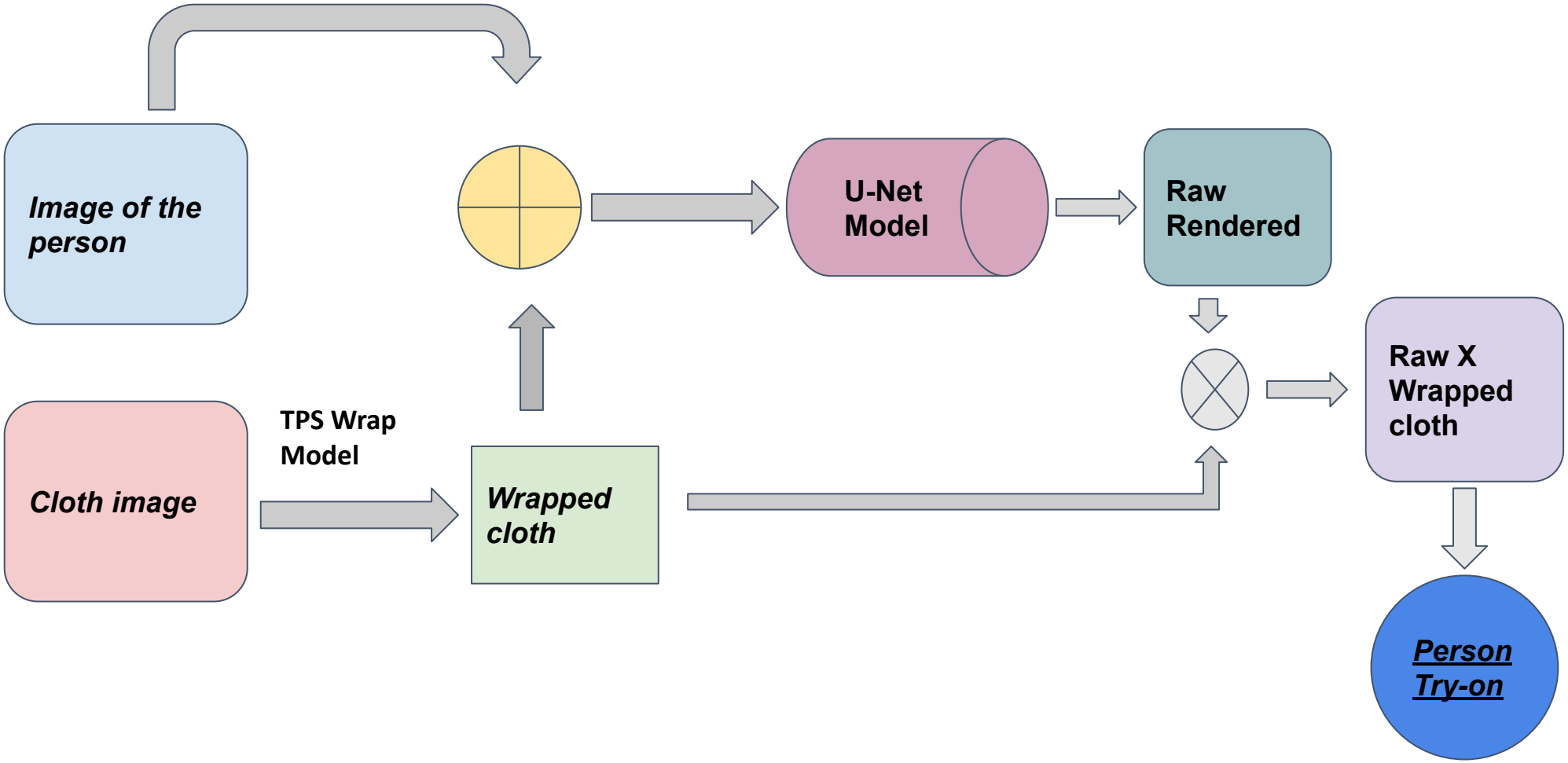
Image of the person
Cloth image
TPS Wrap Model
Wrapped cloth
U-Net Model
Raw Rendered
Raw X Wrapped cloth
Person Try-on

Impact

- Virtual Trailer Room will attract many customers to online shopping than offline.
- The outfit size recommended by the application will be time saving for the customers.
- The standardization of size chart across different brands will help the customer in selecting appropriate size.
- Leads to less returns and save extra shipping charges on the product.
- Profit to the company.

Implementation

1. For Human Body Measurement we will be building our own model using Python, Numpy, Pandas, MatplotLib and OpenCv.

2. In our Virtual Try-On we will be using Machine Learning, Deep Neural Networks, GANs Classifier, CNN, TPS Wrap Model, U-Net Model, RELU Activation functions, Pattern Recognition, Computer Vision, Jupyter Notebook.

3. For building our application we will be using NodeJs (Backend), JavaScript, Express.js (Frontend), Docker, Python, HTML, CSS, Visual Studio.