Part-2

For your project, briefly describe what is the problem you are looking at.

What are the predictor variables and the response variable?

What are the sources of data? Please share the rough schema of your project data.

Please perform the first cut analysis using data collection, data pre-processing and data visualization and share insights for your project.

Please also upload your scripts properly commented and the links to the data sources with your assignment.

Virtual Try-on Problem

Our problem statement: Despite the convenience online fashion shopping provides, people are concerned about how a particular fashion item in an image would look on them. Thus, allowing consumers to virtually try on clothes will not only enhance their shopping experience, transforming the way people shop for clothes, but also save cost for retailers.

New datasets:

The research papers and online repos provided good enough data to train the model but they were of a particular type. If tested on random images it would then it might not give appropriate output.

Spreadshirts.com and redwolf.in were the websites, were we found one of the 2 datasets i.e. only 2D photo of T-shirt or shirt. We are trying to collect some datasets so that we can test the model once it is trained.

Conditions for extraction of image and cloth:

1) Photos should have white background
2) Type/version of image
3) Dimensions of image
4) Photos mostly having upper half of the body with respective cloth

Some sample images of extracted photos are uploaded [here].

Apart from the web scraping we had to also change the properties of the scraped images according to the model requirement, where we used data pre-

processing. The depth of image and dimensions were to be kept to -bit and 256x192 pixels respectively. So, after scraping or downloading datasets we had to check the dimensions of image and convert them to required dimension i.e. 256x192 pixels.

Data Pre-processing:

1) Conversion of format (jpg, png)
2) Change of properties of extracted image (24 bit - 8 bit)- Use of PIL and Opencv

```python
from PIL import Image
Image.open("sample3.jpeg").save("sample4.png")
```

```python
import cv2
#P= "sample1.png"
def convert_8bit(src, dest):
    """
    convert_8bit: String, String -> void.
    Converts the input image file into 8bit depth.
    """

    im = Image.open(src)
    if not im.mode == "P":
        im2 = im.convert("P")
        im2.save(dest)

src= "E:\Shopcom\sample1.png"
dest= "E:\Shopcom\sample4_8bit.png"
convert_8bit(src, dest)
```

In our project, there not such statistical method use or visualisation as the input datasets purely depended upon the images of person earing cloth with white background. The rest of the steps included use of different ML models somewhere or other.