**TECHNICAL REQUIREMENT DOCUMENT (TRD)**

Project name: **Beautify**

Version: TRD 0.1

Author: Group:3

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## PURPOSE

Beautify helps to customize personal styles by enhancing the quality of the image leaving the users with various features. It detects the face and eyes from an image using OpenCV and Pillow to manipulate it. **Pillow** is a third-party Python module for interacting with image files. The module has several functions that makes it easy to crop, resize, and edit the content of an image. With this power of image modification the same way you would with software such as Microsoft Paint or Adobe Photoshop, Python can automatically edit hundreds or thousands of images with ease.

# SOFTWARE

Describe the platform:

* Python version 3.7
* Packages used:-

1. scikit-image:-It is an open source python package that works with numpy arrays.Library consists of algorithms which are useful in filtering the images.
2. OpenCV
3. face\_recognition:Face-recognition is an open source library which is useful to detect the face coordinates on the image.
4. PIL:-It is an open source library which helps to open,manipulate,save different

image file formats.

1. NumPy:- An image is essentially a standard NumPy array containing

pixels of data point.Use basic operations of numpy like masking,slicing etc.

to modify pixel values of images.

* How were the packages installed (using pip, homebrew, etc.)?

pip install numpy

pip install scikit-image

pip install pillow

pip install face\_recognition

* execution order of the modules, what is the sequence?
  + Import and load the data file
  + 2. Preprocess data
  + 3. Create training and testing data
  + 4. Build the model
  + 5. Predict the response

# HARDWARE

Describe the type of machine/device to be used to develop and deploy the product on:

* Desktop, laptop,Handheld devices

How many computers are needed for the development?

* 3

# SCOPE OUT THE WORK

Describe the manpower needed in terms of:

* number of people:-3
* number of hours per person:-100 hours
* etc.