Project Proposal - Digital Makeup Face Generation

Team 29 - Adobe Lite-room

October 18, 2020

1 Project Details

1.1 ID and Title

ID - 12 Title - Digital Makeup Face Generation

1.1.1 Github Link

Digital Makeup Face Generation

1.2 Members

- Shaunak Badani, 20171004
- Manav Bhatia,2018102009
- MD Kalesha,2018102047
- Shantanu Agrawal, 2018102040

2 Project Topic

2.1 Problem Definition

The input - 2 images, reference and target. The output - 1 image.

The reference image is an image of a model / person with makeup that is to be transferred onto the target image. The output is one image, the makeup of the reference on the target image.

2.2 Main Goals of the project

1. Facial landmark recognition
   - A set of points marking landmarks on face
2. Facial Alignment
   - Aligning the two sets of points in the two images using warping.
3. Layer decomposition
   - Decompose the image into lightness and color layers in L * a * b space
   - Decompose the lightness layer into a large scale layer and a detail layer by a Weighted Least Square Filter.
4. Transfer of makeup
   - Done using circular averaging filter.

2.3 Results of the Project

To obtain images which look realistic and do not look computer generated where the target has the makeup of the reference image.

2.4 Project Milestones and expected timeline

- Facial landmark recognition - 25th October
- Facial alignment - 31st october
- Layer decomposition - 10th November
- Final makeup transfer - 17th November
- Testing on different images - 25th November

2.5 Dataset

Available