1. **Abstract**

Swapping faces means transferring a face from a source photo onto a face appearing in a target photo, attempting to generate realistic, unedited looking results. This project implements an image-to-image face swapping but the target would be real time webcam where face would be replaced by the source image. In this project, we present a complete system for automatic face replacement in the webcam. Face swapping algorithms can be roughly divided into three categories: replacement-based, model-based, and learning-based. The Used algorithm is composed of three steps: face alignment, warping and replacement. The accuracy and robustness of the algorithm are enhanced by introducing some learning-based modules like facial landmark detection andface parsing.

1. **Introduction**

Face swapping has been a fascinating problem for image processing researchers

during the last decade because of many important applications such as video face

swapping, digital image archiving, etc. Advances in digital photography have made it possible to capture large collections of high-resolution images and share them on the internet. Talking about the importance of the program, it is very usefull in many types of fiend such as Google Street view. In that you are able to go through all the streets and view the view. Inside that you also be getting peoples who were there. Now because of the privacy their face should be swapped with black color or whatever. Here comes the use of this thing Face swap. Although this used to swap face to face but we can detect the face and later on swap it with anything if we have the algorithm. Doing it manually is not so easy, since number of photos are increasing rapidly so this is as important as other technologies.

Automatic face replacement has other compelling applications as well. For example, people commonly have large personal collections of photos on their computers. These collections often contain many photos of the same person(s) taken with different expressions, and under various poses and lighting conditions. One can use such collections to create novel images by replacing faces in one image with more appealing faces of the same person from other images. For group shots, the “burst” mode available in most cameras can be used to take several images at a time. With an automatic face replacement approach, one could create a single composite image with, for example, everyone smiling and with both eyes open.

1. **Problem Definition**

Recognizing 68 points on face which will contain boundary of the face and as well as eye, nose and mouth, then swapping the triangles made with the points with the source image.

1. **Objective**

What are the the steps you will be taking to solve the problem.

1. **Technology Used**

What are the various model you used to solve the problem.

1. **Problems Faced**

What are the problems faced from collecting data to preprocessing and training the model.

1. **Datasets Used**

Name of the dataset used and some information about what the dataset contain.

1. **Models Used**

Explain the model you used each of its layers and the proper explanation why you choose the particular model.

1. **Implementation**

How you trained the model and tested it.

1. **Result And Performance**

Please elaborate the result your model gave and the performance it gives.

1. **Conclusion And Further Work**
2. **References**