Perfect Moments

Ayesha Mudassir Khwaja
aysh@stanford.edu

Pallabi Ghosh
pallabig@stanford.edu

Motivation

Imagine it’s your child’s graduation. After the ceremony when taking a photo with all their friends, it often doesn’t turn out to be as good as you had hoped. There can be several reasons, but the main reason being difficulty in coordinating everyone at the same moment. For example, if one of their friend’s mom is taking the photo at the same time, their attention might be divided. Similar situations happen during many important moments of our lives. This served as the motivation behind the idea that we want to implement.

We plan to build an algorithm to go back and forth between different frames of a sequence of images to let the user choose the best possible face for each person in the group photo.

Brief project Overview

The user captures a sequence of images of the group of people and the algorithm will detect the faces in the final frame captured. Then the user selects the faces that needs to be modified. The algorithm detects the same face in all the previous frames and displays the options to the user. The user makes his choice and then the algorithm stitches and blends the new face portion into the last frame.

We plan to make our algorithm more robust to hand motion during image capture through adaptive image stabilization [1]. We also plan to use the image stitching technique developed by Levin et. all [2]. To do stitching and blending, if we need weight maps, we would follow the technique used by Mertens et. all [3].

We plan to develop our technique on Open CV on our own systems first and then on Android.

References

