Memory Lane

Images are often the only physical recollection of the past- of a time where few things were digital. These images have helped us relive the memories of a distant past. But these images themselves are not immune to tampering and mishandling. Many images of our loved ones get creased or folded, or develop scratches or just fade away, adding that pinch of salt in an otherwise heartwarming image. What are we to do in this situation?

Memory Lane is a project which uses deep learning to get rid of the unwanted noise and even severe degradation in your precious images to provide you digital copies of these timeless memories!

Up until now, the efforts at making an image restoration model have faced certain technical difficulties due to the adoption of supervised learning. The degradation in real photos tends to be irregular, which gives rise to a domain gap between the synthetically degraded training set images, and the real old photos. The failure of conventional methods is largely due to this very reason.

Therefore, we propose a novel triplet domain translation network by leveraging real photos along with massive synthetic image pairs. We would here translate both the training and testing set into a shared latent space, on which we would train our models, which is expected to give us better results.

We plan to add a secure login and sign up feature to identify users uniquely. The main highlight of our project would be a feature to drop images on the webpage and collect restored images from the webpage itself. After an image has been restored, the user would have an option to add filters to the image and then add the image to favourites to add the transformed image to our database for seamless access from any device with an internet connection.

Apart from all this, if we succeed in developing this ahead of schedule, we plan to add a face detection algorithm to this project so that images can be sorted by the people present in the picture.

With our efforts, we plan to provide a quality product to our users, and restore our users' old pictures with ease.