NANYANG TECHNOLOGICAL UNIVERSITY SINGAPORE

School of Computer Science and Engineering
College of Engineering

Human Facial Attribute Editing

Generating Human Face by GAN

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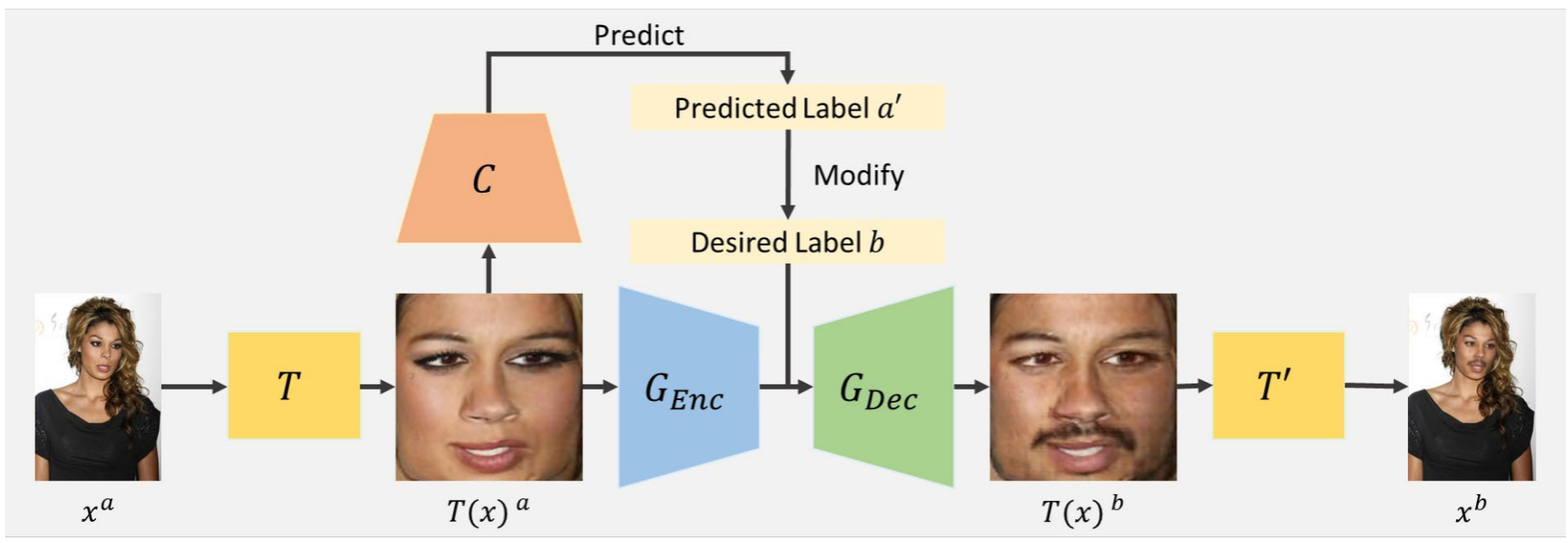
Project Objectives:

This project aims to train a human facial attribute editing model, AttGAN, on the CelebA-HQ dataset, which is pre-processed by a global visual alignment algorithm, GANgealing. This alignment algorithm can generate the face images with a single same view across the dataset. The aligned dataset can also improve the training performance of the facial attribute editing model. In the end, the AttGAN model is integrated into the GANgealing algorithm, allowing for alignment, editing, and editing propagation to be performed in a single application.



Application Pipeline:

A Spatial Transformer Network T from GANgealing, synthesizes the aligned image $T(x)$. An attribute classifier is used to predict the binary attribute label and then modify it to the desired label b, which is used to condition the decoder of the AttGAN generator. Lastly, the image which has been edited is wrapped back to the original image.