Learning To Identify Diseases From Healthy Medical Images

Introduction

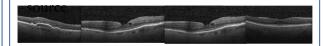
Challenge: to identify diseases like humans by examining normal images to find anomalies

Solution: Deep generative machine learning models VAE and GAN

OCT

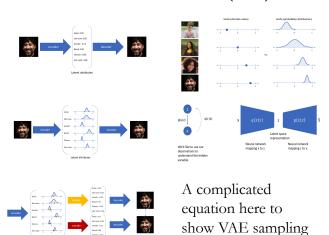
From OCT images identify those with diseases. Instead of transfer learning we are interested in identifying anomalies.

Describe previous work done and data

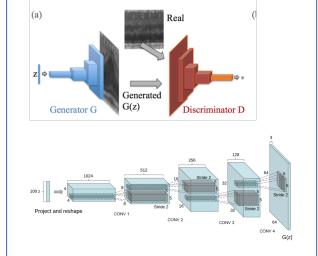


References

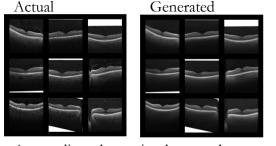
Variational Autoencoders (VAE)



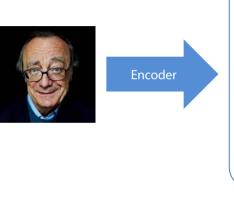
Generative Adversarial Networks (GANs)



Anomaly Detection



A complicated equation here to show anomaly identification



Smile: 0.52

.. 0.52

Skin tone: 0.4

Gender: -0.82

Glasses: 0.85

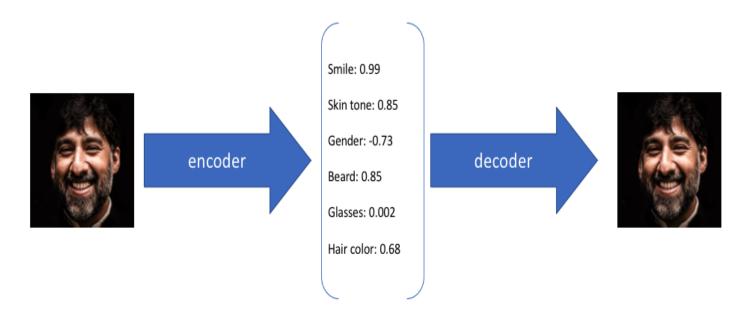
Beard: 0.002

Decoder



Latent attributes

Hair colour: 0.35



Latent attributes