IMAGE GENERATION FROM TEXT DESCRIPTION THROUGH MACHINE LEARNING

The objective of this project is to generate images from the text description given. The model can generate fake but photorealistic images, this project uses Stack Generative Adversarial Network. This project can be used by scientists, designers and even people could use this project to generate a visual representation of a theoretical concept.

The stack generative adversarial network consists of two GANs, the first GAN is called a Stage 1 GAN, where it takes a sentences input and generates an image with primitive shapes and basic colors, it is a low resolution image, the second GAN which is the stage 2 GAN takes the low resolution image which was the stage 1 GAN's output and the original sentence as input and generates a much higher resolution version of the image by completing the details. It is trained using some images with associated text descriptions.

This project will be developed in Python, so it will work in multiple platforms (macOS, Windows, Linux) that support Python and the dependencies required for the project. Two of the core dependencies are Tensorflow which is an open source machine learning library, numpy and the helper class. The project doesn't involve any financial cost. It does require a system with good configuration as it involves machine learning.

Name of the students:

- 1. N. M. Hariharan
- 2. R. Jeevananthan
- 3. S. Praneet
- 4. P. Yathinder

Name of the Guide: Mrs. T. P. Kamatchi