Artwork Creation using AI

We are witnessing the power of AI in every aspect in our daily life. Many human-centric tasks can now be achieved using AI such as driving vehicles, face detection and verification in mobiles security and much more tasks. One of the recent developments in AI is data generation using Generative Adversarial Networks (GANs). The main task of GANs is to synthesize real-world data. For instance, given a dataset of face images, after training the GAN model, it will be able to generate new face images of completely fake identities. It has been used in many applications in computer vision such as deep fake.

The Generative Adversarial Network model itself consists of two deep learning models: A generator and a discriminator. The task of the discriminator is to classify an image as being a real or fake image. The generator on the other hand will try to fool the discriminator by generating fake images and monitoring the classification progress of the discriminator.

From another perspective, creating an artwork is a very challenging task even for us humans. Hence, owning a piece of art would be very expensive. Using GANs would be a very practical and cheap alternative for generating fine artwork. The goal of this project is to train a GAN model to generate images of fine artwork. There are many available public datasets in that would be a good source for training the GAN model. The GAN model will be developed using deep learning frameworks such as TensorFlow or pytorch. This model can be used in a more general context such as creating a web store for AI-generated artwork where a user can browse and buy such digital paintings.