**TEAM 10**

**PROBLEM STATEMENT :**

Image compression over MNIST:

Using convolutional autoencoder, develop a deep learning system that compresses images into 128 dimensional dense vector and recreates the original image

**ABSTRACT:**

Image compression has always been an irreplaceable aspect of multi-media services and transmissions. The recent few decades saw an evolution of this technique due to advancement of science and technology.one such advancement is that in the field of artificial intelligence and machine learning. We propose a Convolutional Auto encoder neural network for image compression by taking MNIST (Modern National Institute of Standards and Technology) dataset where we up sample and down sample an image. Up sampling an image means increasing the quality of images by enlarging them whereas Down sampling is the process of reducing the size of an image without degrading its quality. We take an image 128 by 128 image with noise, consisting of three channels namely red, green, and blue. By developing a deep learning system, the image must be compressed and converted into a 128 by 1 dimensional dense vector. From this vector, we need to get the original image which is noise free which is of the original dimension of 128 by 128.