2019201049

Individual components

Figure 1: The first twenty eigen vectors (components) shown as images, arranged in row-major order.

Reconstructed images

Figure 2: Reconstructed images after selecting diferent number of principal components k, ranging between 26 and 520, all arranged in row-major order. The first image is the original image.

Mean-squared error plot

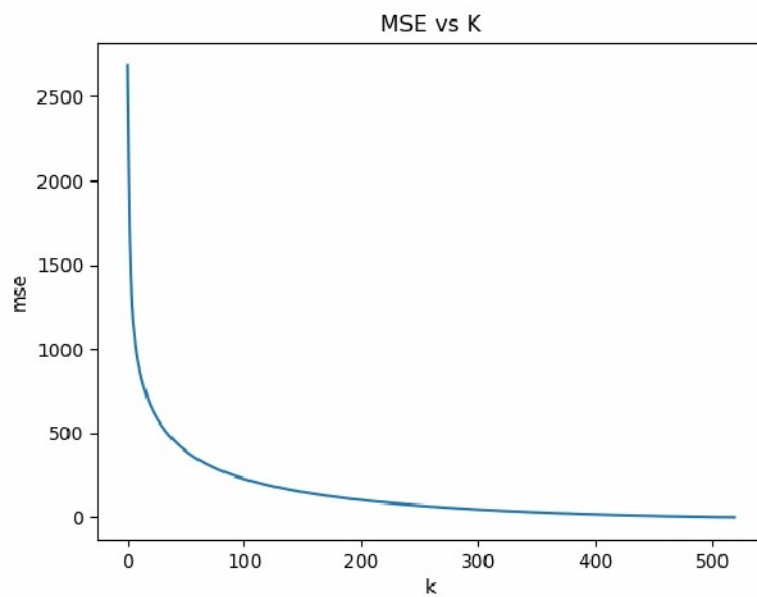Figure 3: Plot shows the variation of the mean-squared error loss between the original images and the reconstructed images, as a function of k.

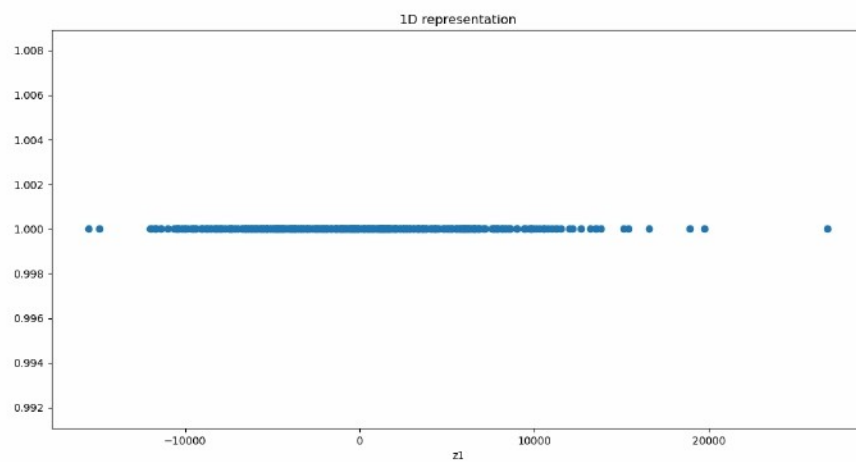## Reduced representations

Figure 4: 1D representation of all the train images, $k = 1$.
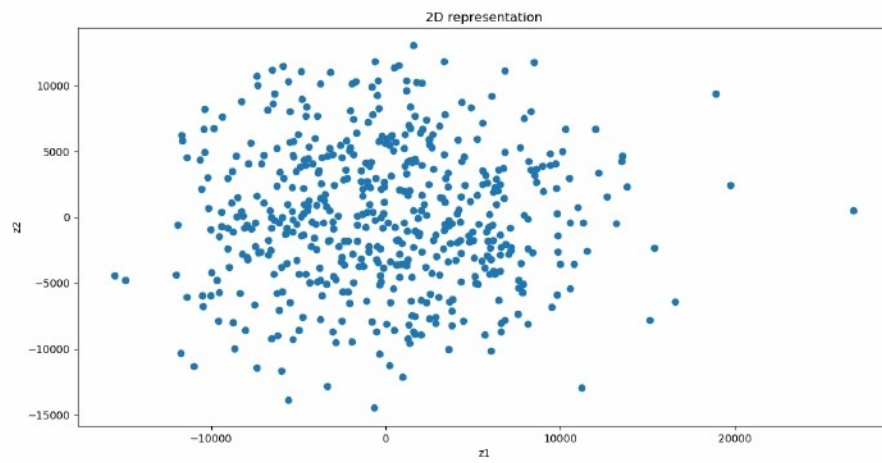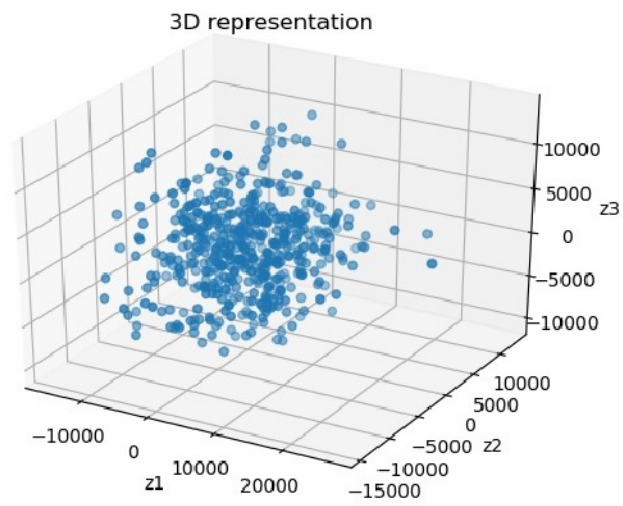
Figure 5: 2D representation of all the train images, $k = 2$.

Figure 6: 3D representation of all the train images, $k = 3$.