

CSE471 Statistical Methods in AI

Mini-project 1

Part-I results

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Individual components



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

Reconstructed images

Sample - dataset/006_014.jpg



Figure 2: Reconstructed images after selecting different 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

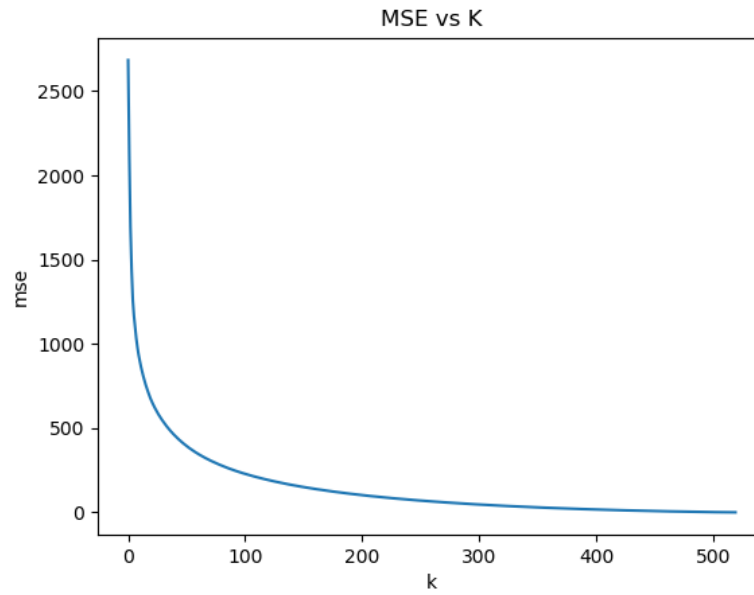


Figure 3: Plot shows the variation of the mean-squared error loss between the original images and the reconstructed images, as a function of k .

Reduced representations

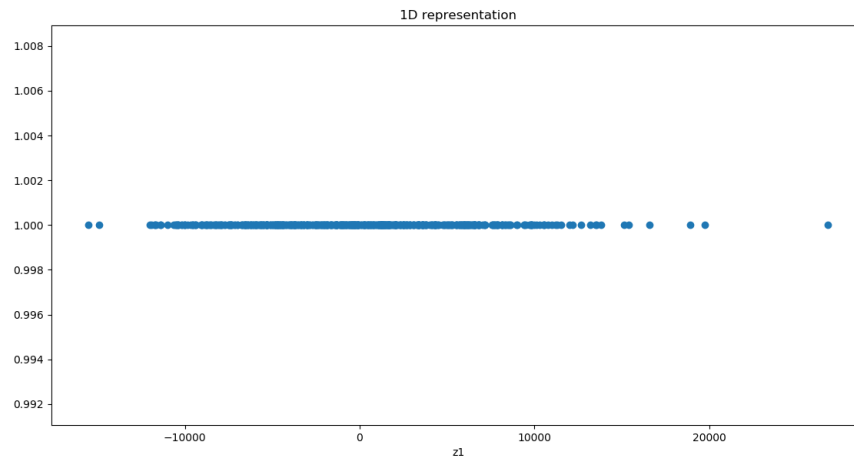


Figure 4: 1D representation of all the train images, $k = 1$.

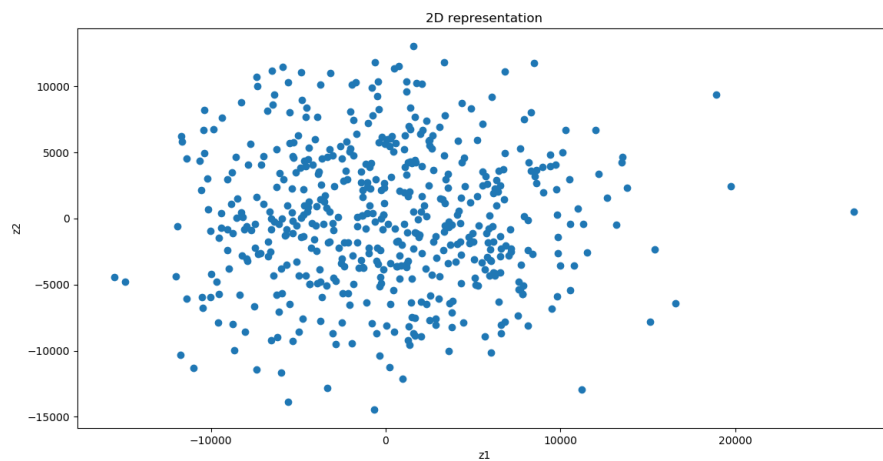


Figure 5: 2D representation of all the train images, $k = 2$.

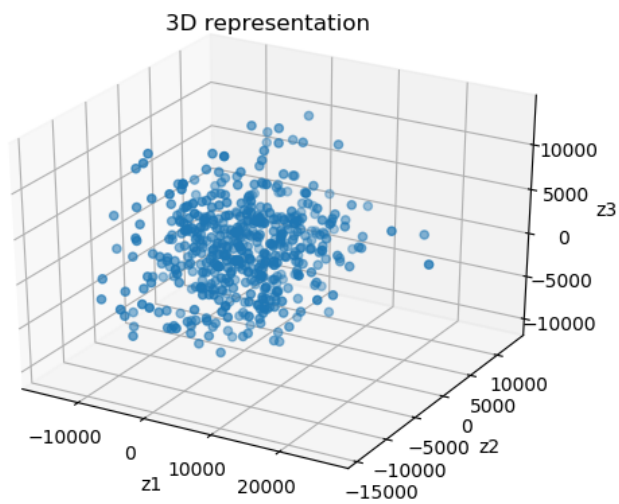


Figure 6: 3D representation of all the train images, $k = 3$.