

In this paper, a new L2-norm regularized regression based face recognition method is proposed, with L0-norm constraint to ensure sparse projection. The proposed method aims to create a transformation matrix that transform the images to sparse vectors with positions of nonzero coefficients depending on the image class. The classification of a new image is a simple process that only depends on calculating the norm of vectors to decide the class of the image. The experimental results on benchmark face databases show that the new method is comparable and sometimes superior to alternative projection based methods published in the field of face recognition.