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# DIMENSIONALITY REDUCTION OF FEATURE DESCRIPTORS USING PCA AND SPARSE REPRESENTATION

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## ABSTRACT

Feature matching is used in many applications such as environmental monitoring, aerial imaging, and surveillance etc. In this paper we discuss the methods for reducing dimensionality of feature descriptors. The extracted features are required to be invariant to different transformation of image like image rotation, scale change and illumination. The combination of different existing algorithms like SIFT, PCA and Sparse representation for feature detection and descriptor development has been discussed.

**KEYWORDS:** SIFT, PCA, SPARSE