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Keaton Hamm* (hamm@math.arizona.edu). *CUR Decompositions and Applications.*

This talk will present some viewpoints of a matrix decomposition (or approximation) method called CUR. We will discuss how the exact decomposition version gives a solution to the subspace clustering problem in the ideal case, and mention extensions when the data contains noise. Particularly, we present an algorithm for subspace clustering of noisy data, and demonstrate its performance on the Hopkins155 motion segmentation dataset. Related to this, we will discuss a matrix perturbation analysis for CUR approximations of an observed matrix which is a small perturbation of a low rank matrix. (Received August 27, 2018)