

Singular Value Decomposition (SVD)

2. Truncated SVD

svds – Find a few singular values and vectors.

S = svds(A,K) computes the K largest singular values of A.

[U,S,V] = svds(A,K) computes the singular vectors as well. If A is M-by-N and K singular values are computed, then U is M-by-K with orthonormal columns, S is K-by-K diagonal, and V is N-by-K with orthonormal columns.

In many applications, a truncated SVD is enough, and it is much easier to compute than the full SVD.