In vector space retrieval each row of the matrix M corresponds to

A. A document
B. A concept
C. A query
D. A term

Answer D

M is an mxn matrix, with m rows corresponding to the m terms in the vocabulary.

Applying SVD to a term-document matrix M. Each concept is represented in K

A. as a singular value
B. as a linear combination of terms of the vocabulary
C. as a linear combination of documents in the document collection
D. as a least squares approximation of the matrix M

Answer B

K is mxr matrix, where the columns correspond to vectors. These vectors correspond to a linear combination of the m terms of the vocabulary.

The number of term vectors in the matrix K_s used for LSI

A. Is smaller than the number of rows in the matrix M
B. Is the same as the number of rows in the matrix M
C. Is larger than the number of rows in the matrix M

Answer B

K_s is a mxs matrix, where each row corresponds to a term in the vocabulary, as for M. The number of columns s is smaller than the number of columns in the original matrix K.

A query transformed into the concept space for LSI has …

A. s components (number of singular values)
B. m components (size of vocabulary)
C. n components (number of documents)

Answer A

The transformed query is a vector over the number of selected concepts s.