

Q3:

Find out which areas (engineering, arts, communications?) are SVD used most?

Other SVD applications:

Engineering

-Linear Dynamical system

-EOF analysis(of ocean topography and climate system)

-Signal processing and pattern recognition

-Numerical weather prediction(Lanczos methods)

-Use of SVD in detecting damage in structures at an early stage

Arts:

-Using latent semantic indexing in facebook by Laura Devendorf

<http://artfordorks.com/2011/07/facebook-singular-value-decomposition/>

An artistic video of the concept of LSI

Communications:

-Wireless communications

-Compression of videos and images

Mathematics and statistics:

-Representation of the range and null space of a matrix

-Pseudoinverse

-Numerical linear algebra

-Low-rank matrix approximation

-Solving Homogeneous linear equations

-Total least squares minimization

-Principal Component Analysis

References:

1.Wikipedia(Singular value decomposition)

2.Application of SVD by Marc Spiegelman 2002.

Available at: http://www.columbia.edu/itc/applied/e3101/SVD_applications.pdf