

WHAT IS SVD? Movie recommendations and other applications

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Abstract:

The "singular value decomposition" is an important tool in machine learning, used most often for dimension reduction but also featured in other ways such as facial identification and recommendation systems. It is also crucial to applications of linear algebra, although unfortunately it isn't always covered in detail (or at all) in linear algebra courses. I'll introduce the singular value decomposition as a generalization of eigenvectors and show how it can be applied in various settings, from image compression to movie recommendations.