

SMAI-2020-Homework 4

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Question 1:-

Consider the equation for computing the SVD:

$$A = U \Sigma V^*$$

SVD decomposition breaks down any invertible transformation into a composition of three geometrical transformations: rotation, scaling, and reflection. True or False?

Answer:-

TRUE

The right and left singular vectors perform Rotation or Reflection. Diagonal Matrix(Middle one) containing the singular values performs the scaling operation.