

Diagram illustrating the SVD decomposition of matrix A into matrices U , Σ , and V^T .

The matrix A is shown on the left, with a horizontal green line representing the i -th row, labeled \mathbf{a}_i^T .

The matrix U is shown in the middle, with a vertical green line representing the j -th column, labeled \mathbf{u}_j .

The matrix Σ is shown in the middle, with a diagonal line representing the singular values, labeled $\sigma_1, \dots, \sigma_c$.

The matrix V^T is shown on the right, with a horizontal green line representing the k -th row, labeled \mathbf{v}_k^T .

The equation is represented as:

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