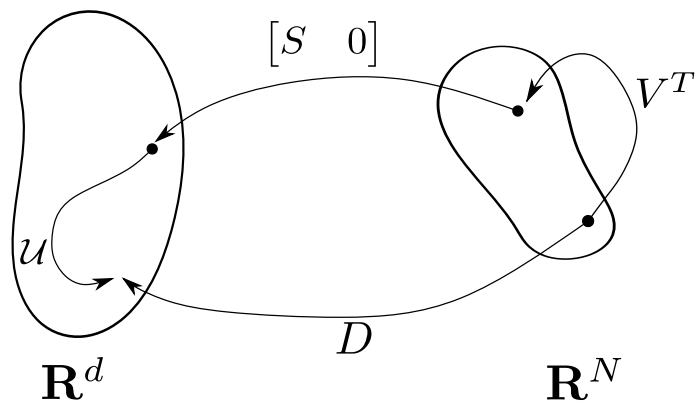$$D : \mathbf{R}^N \rightarrow \mathbf{R}^D = \mathcal{U} \begin{bmatrix} S & 0 \end{bmatrix} V^T$$

Original Matrix

Rotate to $\mathcal{U} - V$ basis