

$$\begin{array}{c}
 \overbrace{\begin{array}{|c|c|c|c|c|c|c|c|} \hline & & & \text{sample } a_j & & & & \\ \hline \end{array}}^{n \text{ samples}} \\
 \left. \begin{array}{|c|} \hline \\ \hline \end{array} \right\} m \text{ features} \\
 \mathbf{A}
 \end{array}
 =
 \begin{array}{c}
 \overbrace{\begin{array}{|c|c|c|c|c|} \hline \mathbf{u}_1 & \mathbf{u}_2 & & & \mathbf{u}_r \\ \hline \end{array}}^r \\
 \mathbf{U}
 \end{array}
 \cdot
 \begin{array}{c}
 \overbrace{\begin{array}{|c|} \hline \sigma_1 \\ \sigma_2 \quad \quad \quad \sigma_r \\ \hline \end{array}}^r \\
 \mathbf{\Sigma}
 \end{array}
 \cdot
 \begin{array}{c}
 \overbrace{\begin{array}{|c|c|c|c|c|c|c|} \hline V_{11} & V_{21} & \cdots & & V_{n1} \\ V_{12} & V_{22} & \cdots & & V_{n2} \\ \vdots & \vdots & \ddots & & \vdots \\ V_{1r} & V_{2r} & \cdots & & V_{nr} \\ \hline \end{array}}^n \\
 \mathbf{V}^T
 \end{array}$$

$$\begin{array}{c}
 \overbrace{\begin{array}{|c|c|c|c|c|} \hline \mathbf{u}_1 & \mathbf{u}_2 & & \mathbf{u}_k & \mathbf{u}_r \\ \hline \end{array}}^k \\
 \mathbf{U}_k
 \end{array}
 \cdot
 \begin{array}{c}
 \overbrace{\begin{array}{|c|} \hline \sigma_1 \\ \sigma_2 \quad \quad \quad \sigma_k \\ \hline \end{array}}^k \\
 \mathbf{\Sigma}_k
 \end{array}
 \cdot
 \begin{array}{c}
 \overbrace{\begin{array}{|c|c|c|c|c|c|c|} \hline V_{11} & V_{21} & \cdots & & V_{n1} \\ V_{12} & V_{22} & \cdots & & V_{n2} \\ \vdots & \vdots & \ddots & & \vdots \\ V_{1r} & V_{2r} & \cdots & & V_{nr} \\ \hline \end{array}}^n \\
 \mathbf{V}_k^T
 \end{array}$$



Source: <https://www.alimentipedia.it/come-si-fa-il-formaggio.html>