

Algorithm	Description	Complexity	Accuracy
Full Eigen Decomposition	Computes all eigenpairs of $A^T A$, AA^T	$\mathcal{O}(n^3)$	Exact
Jacobi Eigenvalue Method	Iteratively zeroes off-diagonal elements	$\mathcal{O}(n^3)$	High
Power Iteration (Used)	Iteratively extracts top eigenvectors via deflation	$\mathcal{O}(kn^2)$	Approximate

Table 1: Comparison of SVD computation methods.