

# Comprehensive Model Comparison

Method	Execution Time (s)	Peak Memory (GB)	Reconstruction Quality	Information Criterion	Factor Stability
SPARSEGFA	343.45	2.41	N/A*	N/A	N/A**
PCA	0.10	2.43	0.6240	N/A	N/A
ICA	0.26	2.45	0.4791	N/A	N/A
FA	22.02	5.89	0.6144	N/A	N/A
NMF	0.84	2.46	0.7350	N/A	N/A
KMEANS	0.97	2.47	0.5644	N/A	N/A**
CCA	1.79	3.66	0.6548	N/A	N/A**

\* *sparseGFA*: CV reconstruction failed (computationally expensive due to MCMC)  
\*\* *sparseGFA*, *CCA*, *K-means*: Factor stability not computed (bootstrap too expensive or not applicable)