

Statistical Testing

DESeq2 Framework

Generalized linear model with negative binomial

edgeR Approach

Empirical Bayes methods for dispersion estimation

Limma-voom

Transform counts for linear modeling

Nonparametric Methods

Rank-based tests when assumptions violated

Benchmarking Results

Performance varies by experimental design

💡 DESeq2 and edgeR are most widely used and well-validated