

Dimensionality Reduction Techniques

Feature Selection

Filter Methods

Filter Methods:

- Correlation
- Chi-Square Test
- ANOVA
- Information Gain

Wrapper Methods:

- Forward Selection
- Backward Selection
- Bi-Directional Elimination

Embedded Methods:

- LASSO
- Elastic Net
- Ridge Regression

Dimension Reduction

Linear Methods

Principal Component Analysis (PCA)

Independent Component Analysis (ICA)

Linear Discriminant Analysis (LDA)

Factor Analysis

Non-Linear Methods

Kernel PCA

Isometric Mapping (ISOMAP)

t-distributed Stochastic Neighbor Embedding (t-SNE)

Uniform Manifold Approximation and Mapping (UMAP)

Auto-encoders