Feature extraction is a crucial step in many machine learning and data processing tasks. It involves transforming raw data into a set of features that can be used for model training and evaluation. There are various techniques for feature extraction, depending on the type of data you’re working with. Here’s a rundown of some common methods:

**Dimensionality Reduction Techniques**

* **Principal Component Analysis (PCA)**: Reduces data dimensions by projecting onto principal components.
* **Linear Discriminant Analysis (LDA)**: Maximizes class separability by projecting onto discriminant axes.
* **t-Distributed Stochastic Neighbor Embedding (t-SNE)**: Reduces dimensions while preserving the local structure of data.
* **Autoencoders**: Neural networks that learn a compressed representation of the input data.