

Feature Extraction

Feature Extraction is process of selecting and extracting the most importance features from raw data.

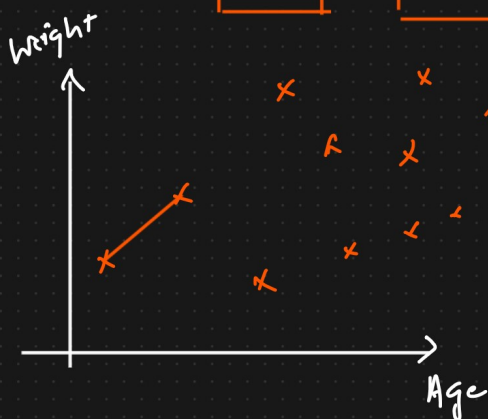
ML Application → 1000 features

↓
Most Important features

↓
Machine Learning Algo.

① Feature Scaling

(y)	(kg)	(cm)	BMI
Age	Weight	Height	
32	70	140cm	-
28	75	160cm	-
35	80	155cm	-



Normalize or Standardize



$$Z\text{-score} = [\mu=0 \quad \sigma=1]$$

$$Z_{\text{score}} = \frac{x_i - \bar{x}}{\mu}$$



Standardization

Normalization [Min Max Scaler]

(0,1)

Unit Vector

② Feature Selection → We just pick the most Important feature

500 features → Top 10 features



ML Model Train

Correlation



Feature Selection

① Filter Method ② Embedded Method

③ PCA { Principal Component Analysis }.