

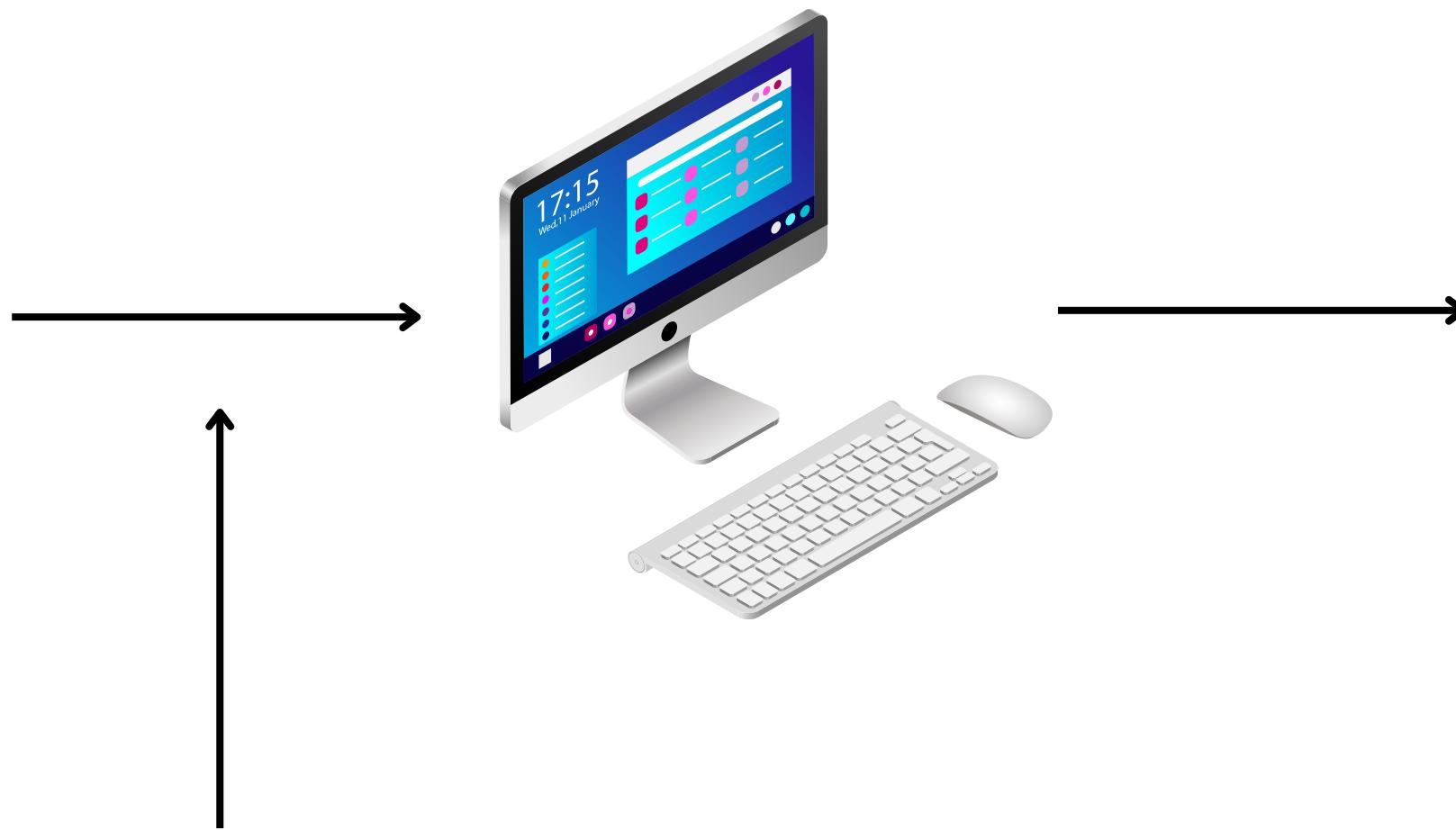
DATA PRE- PROCESSING TECHNIQUES

DATA



PREDICTION

DATA



PRE-
PROCESSING

PRE-PROCESSING TECHNIQUES

- DATA CLEANING
- DATA TRANSFORMATION
- DATA REDUCTION
- DATA DISCRETIZATION
- DATA INTEGRATION
- DATA BALANCING
- DATE AND TIME HANDLING

DATA CLEANING

- **MISSING VALUES**
- **OUTLIERS**
- **DUPLICATES**
- **WRONG FORMAT**



DATA TRANSFORMATION

- **NORMALIZATION**
- **CATEGORICAL ENCODING**
(ONEHOT , GETDUMMIES)
- **FEATURE ENGINEERING**



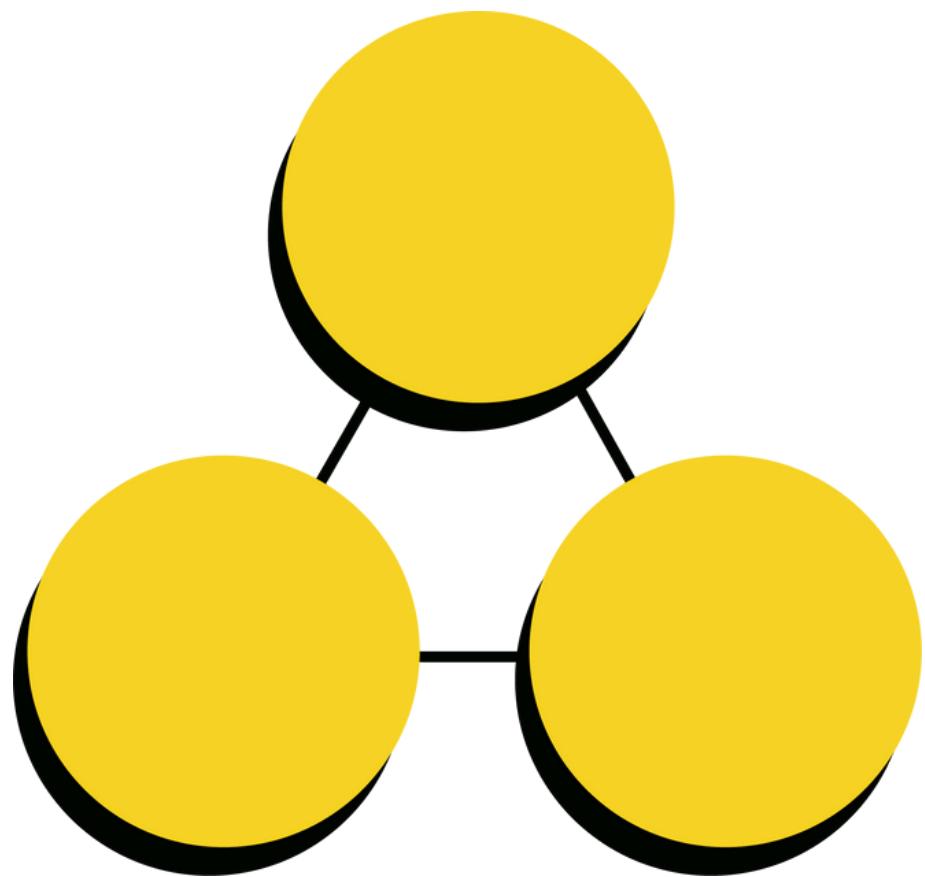
DATA REDUCTION

- DIMENSIONALITY
REDUCTION(PCA)
- FEATURE SELECTION



DATA DISCRETIZATION

- **BINNING**



DATA BALANCING

- OVERSAMPLING
- UNDERSAMPLING

DATA INTEGRATION

- MERGING DATA

DATE AND TIME HANDLING

- **EXTRACTING FEATURES**