

# RANDOM FOREST CLASSIFIER

RED WINE QUALITY PREDICTOR

TEAM 7

# RANDOM FOREST CLASSIFIER

- Random Forest is an ensemble learning algorithm
- It builds multiple decision trees during training
- Each tree is trained on a random subset of data
- Final prediction is made using majority voting
- Helps improve accuracy and stability

# WINE QUALITY DATASET

- Contains chemical properties of red wine samples
- Total features: 11 numerical variables
- Target variable: Wine quality score
- Converted into binary classification:
  - Good quality ( $\geq 7$ )
  - Bad quality ( $< 7$ )
- Dataset is clean with no missing values

# WHY RANDOM FOREST WORKS WELL

- Reduces overfitting compared to a single decision tree
- Handles non-linear relationships
- Works well with numerical features
- Robust to noise and outliers
- Performs well even without heavy preprocessing

**THANK  
YOU**