30 original classification questions

Notes for SHS | Data Science | Topic 87 | 25 November 2026

Question 1 · Foundations

Define supervised classification

Hint: identify the dataset, positive-class definition, correct denominator or evaluation boundary.

Question 2 · Foundations

Classification versus regression

Hint: identify the dataset, positive-class definition, correct denominator or evaluation boundary.

Question 3 · Foundations

What is supervised learning?

Hint: identify the dataset, positive-class definition, correct denominator or evaluation boundary.

Question 4 · Foundations

Identify four Iris features

Hint: identify the dataset, positive-class definition, correct denominator or evaluation boundary.

Question 5 · Foundations

Identify Iris targets

Hint: identify the dataset, positive-class definition, correct denominator or evaluation boundary.

Question 6 · Foundations

What is binary classification?

Hint: identify the dataset, positive-class definition, correct denominator or evaluation boundary.

Question 7 · Foundations

What is multiclass classification?

Hint: identify the dataset, positive-class definition, correct denominator or evaluation boundary.

Question 8 · Foundations

Why inspect class counts?

Hint: identify the dataset, positive-class definition, correct denominator or evaluation boundary.

Question 9 · Foundations

Why keep the test set untouched?

Hint: identify the dataset, positive-class definition, correct denominator or evaluation boundary.

Question 10 · Foundations

What baseline does the project use?

Hint: identify the dataset, positive-class definition, correct denominator or evaluation boundary.

Question 11 · Calculations

Calculate Iris class proportions

Hint: identify the dataset, positive-class definition, correct denominator or evaluation boundary.

Question 12 · Calculations

Calculate an 80/20 split

Hint: identify the dataset, positive-class definition, correct denominator or evaluation boundary.

Question 13 · Calculations

Interpret illustrative probabilities

Hint: identify the dataset, positive-class definition, correct denominator or evaluation boundary.

Question 14 · Calculations

Compute Gini impurity

Hint: identify the dataset, positive-class definition, correct denominator or evaluation boundary.

Question 15 · Calculations

Interpret the synthetic matrix

Hint: identify the dataset, positive-class definition, correct denominator or evaluation boundary.

Question 16 · Calculations

Calculate accuracy

Hint: identify the dataset, positive-class definition, correct denominator or evaluation boundary.

Question 17 · Calculations

Calculate precision

Hint: identify the dataset, positive-class definition, correct denominator or evaluation boundary.

Question 18 · Calculations

Calculate recall

Hint: identify the dataset, positive-class definition, correct denominator or evaluation boundary.

Question 19 · Calculations

Calculate specificity

Hint: identify the dataset, positive-class definition, correct denominator or evaluation boundary.

Question 20 · Calculations

Calculate F1

Hint: identify the dataset, positive-class definition, correct denominator or evaluation boundary.

Question 21 · Evaluation

Calculate balanced accuracy

Hint: identify the dataset, positive-class definition, correct denominator or evaluation boundary.

Question 22 · Evaluation

Explain misleading imbalanced accuracy

Hint: identify the dataset, positive-class definition, correct denominator or evaluation boundary.

Question 23 · Evaluation

What is macro F1?

Hint: identify the dataset, positive-class definition, correct denominator or evaluation boundary.

Question 24 · Evaluation

Precision versus recall

Hint: identify the dataset, positive-class definition, correct denominator or evaluation boundary.

Question 25 · Evaluation

A probability 0.70 at two thresholds

Hint: identify the dataset, positive-class definition, correct denominator or evaluation boundary.

Question 26 · Evaluation

Identify leakage

Hint: identify the dataset, positive-class definition, correct denominator or evaluation boundary.

Question 27 · Evaluation

Explain overfitting of deep trees

Hint: identify the dataset, positive-class definition, correct denominator or evaluation boundary.

Question 28 · Evaluation

Interpret five-fold macro-F1

Hint: identify the dataset, positive-class definition, correct denominator or evaluation boundary.

Question 29 · Evaluation

Choose among three algorithms

Hint: identify the dataset, positive-class definition, correct denominator or evaluation boundary.

Question 30 · Evaluation

Write a responsible model recommendation

Hint: identify the dataset, positive-class definition, correct denominator or evaluation boundary.