

1. Which type of learning uses historical data to make predictions?

- a) **Supervised Learning**
- b) Unsupervised Learning
- c) Reinforcement Learning
- d) Semi-supervised Learning

2. In which algorithm does each decision tree vote for the most popular class in Decision Trees case study?

- a) **Random Forest**
- b) K-Nearest Neighbors
- c) Naive Bayes
- d) Support Vector Machines

3. Which algorithm uses conditional probabilities for classification in Naive Bayes Classifier?

- a) K-Means
- b) Gradient Boosting Machines
- c) Neural Network
- d) **Naive Bayes**

4. What is the primary use of K-Nearest Neighbors Algorithm?

- a) Regression
- b) Clustering
- c) **Classification**
- d) Dimensionality Reduction

5. Which technique combines multiple models to improve performance in Ensemble Learning?

- a) Feature Scaling
- b) Hyperparameter Tuning
- c) **Model Ensembling**
- d) Principal Component Analysis

6. What type of learning does a spam email filter use to categorize emails as spam or not spam?

- a) **Supervised Learning**
- b) Unsupervised Learning
- c) Reinforcement Learning
- d) Semi-supervised Learning

7. Which unsupervised learning algorithm groups data points into clusters?

- a) Decision Trees
- b) **K-Means**
- c) Naive Bayes
- d) Neural Network

8. What is the purpose of clustering in unsupervised learning?

- a) Predicting continuous values
- b) Classifying data into categories
- c) **Discovering patterns in data**
- d) Reducing the dimensionality of data

9. Which algorithm separates data points by maximizing the margin between classes in Support Vector Machines?

- a) Gradient Boosting Machines
- b) Decision Trees
- c) Neural Network
- d) **Support Vector Machines**

10. What is the primary task of regression in machine learning?

- a) Grouping similar data
- b) **Predicting continuous values**
- c) Classifying data
- d) Reducing dimensionality

11. In Multiple Linear Regression, what does the term "multiple" refer to?

- a) Multiple output variables
- b) **Multiple predictor variables**
- c) Multiple layers in the model
- d) Multiple iterations

12. How does a Decision Tree algorithm handle missing values in the dataset?

- a) **Ignores missing values**
- b) Imputes with mean values
- c) Imputes with median values
- d) Assigns a random value

13. What is the primary characteristic of the Naive Bayes Classifier?

- a) **It assumes feature independence**
- b) It uses ensemble of decision trees
- c) It's a non-parametric algorithm
- d) It doesn't require hyperparameter tuning

14. How does the K-Nearest Neighbors Algorithm classify a new data point?

- a) By finding the median
- b) By averaging the nearest neighbors
- c) **By taking the majority vote**
- d) By using linear regression

15. Which ensemble learning method combines weak learners in a sequential manner in Gradient Boosting Machines?

- a) Bagging
- b) **Boosting**
- c) Stacking
- d) Voting

16. In Support Vector Machines, what does the kernel function do?

- a) **Maps data to higher-dimensional space**
- b) Normalizes the data
- c) Filters out noisy data
- d) Balances the class distribution

17. What is the primary objective of the K-Means clustering algorithm?

- a) Reducing dimensionality
- b) Maximizing intra-cluster variance
- c) **Minimizing inter-cluster distance**
- d) Identifying outliers

18. Which activation function is commonly used in the output layer of a Neural Network for binary classification?

- a) ReLU
- b) **Sigmoid**
- c) Tanh
- d) Leaky ReLU

19. What is the main drawback of the Simple Linear Regression model?

- a) It's sensitive to outliers
- b) It can't handle non-linear relationships
- c) It requires feature scaling
- d) **all of the above**

20. In machine learning, what does 'overfitting' refer to?

- a) Model performs well on new data
- b) **Model memorizes the training data**
- c) Model underperforms due to lack of data
- d) Model generalizes well

21. How does pruning help improve Decision Trees?

- a) Increases model complexity
- b) **Reduces overfitting**
- c) Accelerates model training
- d) Adds more branches

22. What does "k" represent in K-Nearest Neighbors?

- a) Number of features
- b) Number of clusters
- c) **Number of neighbors**
- d) Number of classes

23. What's the role of the activation function in a Neural Network?

- a) **Data transformation**
- b) Regularization
- c) Gradient descent
- d) Initialization

24. What does the term "feature scaling" involve in preprocessing for Supervised Learning algorithms?

- a) Removing outliers
- b) **Standardizing the range of features**
- c) Reducing dimensionality
- d) One-hot encoding

25. In Simple Linear Regression, what does the slope of the regression line represent?
- a) Intercept
  - b) Coefficient of determination
  - c) **Change in independent variable per unit change in dependent variable**
  - d) Mean squared error
26. How does Multiple Linear Regression differ from Simple Linear Regression?
- a) Allows for multiple target variables
  - b) **Allows for multiple independent variables**
  - c) Uses non-linear relationships
  - d) Is a non-parametric method
27. How does the K-Nearest Neighbors Algorithm classify a new data point in a regression task?
- a) **By taking the mean of the nearest neighbors**
  - b) By calculating the mode of the nearest neighbors
  - c) By using linear regression
  - d) By taking the median of the nearest neighbors
28. What's the primary advantage of Random Forest over a single Decision Tree?
- a) Lower computational complexity
  - b) **Reduced overfitting**
  - c) Simplicity in interpretation
  - d) Better handling of missing values
29. What boosting algorithm introduces new models that correct errors made by the previous models?
- a) **AdaBoost**
  - b) Gradient Boosting Machines
  - c) Decision Tree
  - d) random forest
30. Which type of learning uses labeled data for training?
- a) **Supervised Learning**
  - b) Unsupervised Learning
  - c) Semi-supervised Learning
  - d) Reinforcement Learning
31. What is the primary task of a decision tree in machine learning?
- a) Classification
  - b) Regression
  - c) Clustering
  - d) **both a and b**
32. In K-Means clustering, how are data points grouped?
- a) Randomly
  - b) **Based on distances**
  - c) Alphabetically
  - d) Based on outliers

33. Which algorithm predicts the target variable by finding the nearest data points?

- a) Decision Trees
- b) **K-Nearest Neighbors**
- c) Random Forest
- d) Support Vector Machines

34. What is the primary purpose of machine learning?

- a) Automating tasks
- b) Analyzing historical data
- c) **Predicting future outcomes**
- d) Creating algorithms

35. Which type of learning finds patterns and structures in data without labeled outcomes?

- a) Supervised Learning
- b) **Unsupervised Learning**
- c) Reinforcement Learning
- d) Semi-supervised Learning

36. Which technique in outlier detection is known for its ability to efficiently handle datasets with varying densities and irregular shapes, and does not require specifying the number of clusters beforehand?

K-means clustering

Isolation Forest

**DBSCAN**

Z-score method

What is machine learning?

- a) **A subset of AI**
- b) A programming language
- c) Human learning process
- d) A type of database

What are the two main types of machine learning algorithms?

- a) Linear and Nonlinear
- b) **Supervised and Unsupervised**
- c) Decision Trees and Clustering
- d) Regression and Classification

In supervised learning, what is the role of the algorithm?

- a) **Predicting labels**
- b) Discovering patterns
- c) Clustering data
- d) Learning from scratch

What is the primary goal of unsupervised learning?

- a) Predicting labels
- b) Discovering patterns
- c) **Clustering data**
- d) Learning from scratch

Give an example of a machine learning application.

- a) Sorting algorithms
- b) **Image recognition**
- c) Web development
- d) File management

How do you evaluate machine learning techniques?

- a) Using random numbers
- b) Trial and error
- c) **Cross-validation**
- d) Writing code

Which distance measure is commonly used in K-means clustering algorithm to calculate the distance between data points and cluster centroids?

**Euclidean distance**

Manhattan distance

Cosine similarity

Mahalanobis distance

Which linkage method in hierarchical clustering evaluates the dissimilarity between two clusters by considering the distance between their farthest points?

Single linkage

**Complete linkage**

Average linkage

Ward's linkage

Q: In a clustering case study involving hierarchical clustering, what is a potential drawback when dealing with a large dataset?

- a. Hierarchical clustering requires less computational resources compared to other clustering algorithms.
- b. **Hierarchical clustering can become computationally expensive due to its time complexity, particularly with large datasets.**
- c. Hierarchical clustering always guarantees the optimal number of clusters regardless of the dataset size.
- d. Hierarchical clustering tends to perform better than other clustering algorithms when dealing with large datasets.

In clustering, what is K-means used for?

- a) Dimensionality reduction
- b) Classification
- c) **Finding centroids**
- d) Image recognition

What is the purpose of hierarchical clustering?

- a) Sorting data
- b) **Grouping similar items**
- c) Extracting features
- d) Predicting labels

Q: What is the primary difference between supervised and unsupervised learning?

A. **Supervised learning requires labeled data for training while unsupervised learning does not.**

B. Supervised learning is used for classification tasks only while unsupervised learning is used for regression tasks.

C. Supervised learning algorithms do not require training while unsupervised learning algorithms do.

D. Supervised learning focuses on minimizing error while unsupervised learning focuses on maximizing accuracy.

Which of the following methods is used to evaluate machine learning techniques by splitting the dataset into two parts: one for training and the other for testing?

Cross-validation

Grid search

**Holdout method**

Dimensionality reduction

Which step of data pre-processing involves handling missing values, outliers, and inconsistencies in the dataset?

Data Validation

Feature selection

**Data cleaning & transformation**

Dimensionality reduction

Which algorithm is used for hierarchical clustering?

a) K-means

b) Apriori

c) Decision Trees

d) **Agglomerative**

How many clusters should be formed in the "mall\_customers.csv" dataset?

a) 2

b) **5**

c) 10

d) 20

What does WSS stand for in clustering?

a) World Soccer Stadium

b) **Within-Cluster Sum of Squares**

c) Western Security System

d) Weighted Scaling System

Which machine learning algorithm is an ensemble method?

a) K-means

b) SVM

c) **Random Forest**

d) Linear Regression

What does SVM stand for?

- a) **Support Vector Machine**
- b) Simple Vector Model
- c) Supervised Validation Method
- d) Scaling and Validation

What is the purpose of the Naïve Bayes classifier?

- a) Clustering data
- b) Dimensionality reduction
- c) **Text classification**
- d) Image recognition

In Ridge Regression, what does the regularization term control?

- a) Bias
- b) Variance
- c) **Both Bias and Variance**
- d) Scaling

What is the difference between ARMA and ARIMA models?

- a) ARMA is for time series, ARIMA is for regression
- b) **ARMA includes autoregression, ARIMA includes moving average**
- c) ARMA has a trend, ARIMA is stationary
- d) ARMA has seasonality, ARIMA does not

What is the purpose of autocorrelation in time series analysis?

- a) To find outliers
- b) To measure similarity
- c) To detect trends
- d) **To assess temporal dependence**

What are ROC and AUC used for in machine learning?

- a) **Model evaluation**
- b) Data preprocessing
- c) Dimensionality reduction
- d) Clustering

What scikit-learn function is commonly used for cross-validation in machine learning?

- a) **cross\_validate()**
- b) validate\_model()
- c) model\_crosscheck()
- d) crosscheck\_model()

In feature engineering, what does "binning" refer to?

- a) Creating new features from existing ones
- b) **Discretizing continuous features**
- c) Removing outliers from the dataset
- d) Normalizing feature values

What is the primary purpose of t-SNE (t-Distributed Stochastic Neighbor Embedding)?

- a) **Dimensionality reduction**
- b) Feature scaling
- c) Data imputation



d) Model training

When performing hierarchical clustering, what does the "linkage" parameter determine?

- a) Number of clusters
- b) **Merging strategy of clusters**
- c) Dissimilarity measure between clusters
- d) Centroid of a cluster

In the context of ARIMA models, what does the term "I" stand for?

- a) Isolation
- b) **Integration**
- c) Inertia
- d) Independence

How is the ROC curve related to the true positive rate (Sensitivity) and false positive rate in classification problems?

- a) ROC is the same as sensitivity
- b) ROC is the inverse of sensitivity
- c) ROC measures precision
- d) **ROC plots sensitivity against 1-specificity**

What is the primary purpose of ACF (Auto-correlation Function) in time series analysis?

- a) Measuring model accuracy
- b) **Capturing temporal dependence**
- c) Reducing model interpretability
- d) Feature importance

In ARMA models, what does the term "MA" stand for?

- a) **Moving Average**
- b) Mean Absolute
- c) Maximum Autocorrelation
- d) Model Adaptation

What is the primary goal of calculating Mean Squared Error (MSE) in regression analysis?

- a) **Minimizing the mean of squared errors**
- b) Maximizing the variance of errors
- c) Reducing computational time
- d) Identifying outliers

In support vector machines (SVM), what is the purpose of the kernel function?

- a) It determines the learning rate
- b) **It transforms data to a higher-dimensional space**
- c) It controls the number of support vectors
- d) It regulates the margin between classes

What is the main disadvantage of using the Gaussian Naïve Bayes algorithm for text classification?

- a) Assumes independence of features
- b) **Inefficient for large datasets**
- c) Requires labeled anomalies
- d) Ignores the class distribution

In ensemble learning, what is bagging primarily designed to reduce?

- a) Bias
- b) **Variance**
- c) Overfitting
- d) Model complexity

How does the learning rate hyperparameter influence the performance of a gradient boosting machine?

- a) It controls the number of trees
- b) It determines the maximum depth of each tree
- c) It influences the contribution of each tree
- d) **It regulates the rate of learning**

What is the key idea behind model stacking in ensemble learning?

- a) Training multiple models independently
- b) **Combining predictions to create a meta-model**
- c) Creating a large ensemble of models
- d) Using a single powerful model for all tasks

In Apriori algorithm, what does the "confidence" of an association rule represent?

- a) The frequency of the antecedent itemset
- b) The probability of the rule being true
- c) The ratio of support to joint support
- d) **The accuracy of the rule**

Explain the bias-variance tradeoff and its impact on model performance.

- a) Tradeoff between accuracy and speed
- b) Balancing model complexity
- c) **Managing underfitting and overfitting**
- d) Addressing missing data

What is the difference between bagging and boosting in ensemble learning?

- a) Both methods are identical
- b) **Bagging reduces variance, boosting reduces bias**
- c) Bagging combines weak learners, boosting combines strong learners
- d) Bagging focuses on precision, boosting on recall

In support vector machines, what is the role of the kernel function?

- a) **Defines decision boundary**
- b) Reduces computational cost
- c) Measures model interpretability
- d) Enhances data preprocessing

How does ElasticNet Regression differ from Lasso and Ridge Regression?

- a) **Combines L1 and L2 regularization**
- b) Focuses only on feature selection
- c) Ignores regularization altogether
- d) Employs non-linear transformations

What is the purpose of the Laplacian eigenmap algorithm in dimensionality reduction?

- a) Clustering data
- b) **Visualizing high-dimensional data**
- c) Predicting labels
- d) Reducing model bias

Explain the role of a confusion matrix in multi-class classification.

- a) Measures overall model accuracy
- b) **Evaluates model precision and recall**
- c) Detects model bias
- d) Determines feature importance

How does the Normalized Discounted Cumulative Gain (NDCG) differ from Precision at K in recommendation systems?

- a) **NDCG considers ranking position**
- b) Precision at K is more robust
- c) NDCG focuses on recall
- d) Precision at K is scale-independent

What is the purpose of auto-regression in time series analysis?

- a) **Predicts future values**
- b) Identifies outliers
- c) Measures model complexity
- d) Quantifies temporal dependence

In ARIMA models, explain the significance of the integrated (I) component.

- a) Removes seasonality
- b) **Achieves stationarity**
- c) Captures autoregression
- d) Enhances model interpretability

How does the Area Under the Curve (AUC) differ from the Receiver Operating Characteristic (ROC) curve in model evaluation?

- a) AUC measures precision
- b) ROC curve visualizes true positive rate
- c) **AUC quantifies model accuracy**
- d) ROC curve assesses classification boundaries

Explain the purpose of moving average models in time series analysis.

- a) **Captures trend over time**
- b) Averages model predictions
- c) Minimizes model bias
- d) Quantifies model variance

What technique is used to reduce the number of input variables in a dataset while preserving the most important information?

Feature engineering

Data cleaning

**Dimensionality reduction**

Feature selection

Which method is commonly used for feature selection that evaluates the importance of each feature by analyzing its contribution to the overall performance of the model?

Principal Component Analysis (PCA)

**Recursive Feature Elimination (RFE)**

t-Distributed Stochastic Neighbor Embedding (t-SNE)

Singular Value Decomposition (SVD)

Which of the following techniques is commonly used for dimensionality reduction and visualization of high-dimensional data?

Principal Component Analysis (PCA)

K-means clustering

**t-Distributed Stochastic Neighbor Embedding (t-SNE)**

Distance Measure

Explain the purpose of residual analysis in regression models.

a) Quantifies model variance

b) **Evaluates model assumptions**

c) Measures feature importance

d) Minimizes model complexity

In time series analysis, what is the significance of autocorrelation in the residuals?

a) Measures model accuracy

b) **Identifies serial dependence**

c) Quantifies model bias

d) Reduces overfitting

How does the F1 score account for class imbalance in classification problems?

a) **Gives equal weight to precision and recall**

b) Prioritizes majority class

c) Focuses on minority class

d) Ignores class distribution

What is the fundamental difference between supervised and unsupervised learning?

a) Feature creation

b) **Data labeling**

c) Dimensionality reduction

d) Model evaluation

In machine learning applications, what is the primary goal of feature engineering?

- a) Increase model complexity
- b) **Improve model interpretability**
- c) Decrease training time
- d) Enhance data visualization

Why is data validation crucial in the feature engineering process?

- a) **To improve model accuracy**
- b) To speed up data preprocessing
- c) To increase model complexity
- d) To reduce model interpretability

What does the term "Dimensionality reduction" refer to in machine learning?

- a) Increasing feature space
- b) **Reducing the number of features**
- c) Creating new features
- d) Enhancing model bias

What is the primary purpose of t-SNE (t-Distributed Stochastic Neighbor Embedding)?

- a) **Dimensionality reduction**
- b) Feature scaling
- c) Model validation
- d) Data cleaning

In K-means clustering, how is the initial placement of centroids determined?

- a) **Randomly**
- b) Based on feature importance
- c) By clustering data points
- d) According to feature scaling

What is the significance of scaling and weighting in distance measures for clustering?

- a) Improves model interpretability
- b) **Enhances model accuracy**
- c) Reduces computation time
- d) Avoids feature engineering bias

Why is calculating the Within-Cluster Sum of Squares (WSS) important in clustering analysis?

- a) Measures clustering accuracy
- b) **Evaluates cluster compactness**
- c) Assesses feature importance
- d) Quantifies data preprocessing

In hierarchical clustering, what does the linkage method determine?

- a) Number of clusters formed
- b) **Distance between data points**
- c) Distribution of cluster sizes
- d) Clustering algorithm used

How does DBSCAN clustering handle outliers in the dataset?

- a) Ignores outliers
- b) **Treats outliers as a new cluster**
- c) Removes outliers from the dataset
- d) Reduces dimensionality

What is the primary objective of linear regression?

- a) Classification
- b) Clustering
- c) **Prediction of numerical values**
- d) Feature selection

In logistic regression, what does the sigmoid function do?

- a) **Maps real values to probabilities**
- b) Calculates mean squared error
- c) Measures model complexity
- d) Applies regularization

What is the purpose of the regularization term in Ridge Regression?

- a) **Controls model bias**
- b) Minimizes feature importance
- c) Increases model interpretability
- d) Enhances model accuracy

How does Elastic Net Regression differ from Lasso and Ridge Regression?

- a) **Combines L1 and L2 regularization**
- b) Focuses only on feature selection
- c) Ignores regularization altogether
- d) Employs non-linear transformations

What is the key principle behind the Support Vector Machines (SVM) classification?

- a) Minimizing model complexity
- b) **Maximizing margin between classes**
- c) Reducing feature dimensionality
- d) Increasing model interpretability

In SVM, how does the choice of the kernel affect the decision boundary?

- a) **Defines decision boundary**
- b) Reduces computation time
- c) Measures model interpretability
- d) Enhances data preprocessing

What is the purpose of Discriminant Analysis in machine learning?

- a) Clustering data
- b) **Feature extraction**
- c) Predicting numerical values

d) Evaluating model interpretability

How does the K-Nearest Neighbors (KNN) algorithm classify a new data point?

- a) **Majority vote**
- b) Weighted average
- c) Random selection
- d) Decision tree approach

What is the key concept behind Decision Trees in machine learning?

- a) Feature selection
- b) Clustering
- c) **Hierarchical structure**
- d) Regression modeling

What does the term "Ensembling" refer to in machine learning?

- a) **Combining multiple models**
- b) Data preprocessing
- c) Feature extraction
- d) Clustering

In Random Forest, what is the purpose of bagging?

- a) Reducing model complexity
- b) Improving model interpretability
- c) **Training multiple models**
- d) Feature scaling

What is the primary goal of the Apriori algorithm in association rule mining?

- a) Clustering data
- b) **Finding frequent itemsets**
- c) Feature selection
- d) Dimensionality reduction

How does Apriori generate association rules from transactional data?

- a) Using supervised learning
- b) **Mining frequent itemsets**
- c) Feature engineering
- d) Dimensionality reduction

What is the key concept behind Polynomial Regression?

- a) Linear decision boundary
- b) **Polynomial decision boundary**
- c) Clustering
- d) Feature selection

How does Ridge Regression handle multicollinearity in features?

- a) Ignores correlated features
- b) **Penalizes large coefficients**
- c) Removes correlated features
- d) Applies feature scaling

What is the purpose of t-SNE (t-Distributed Stochastic Neighbor Embedding) in dimensionality reduction?

- a) Clustering data
- b) **Visualization of high-dimensional data**
- c) Prediction of numerical values
- d) Feature selection

How does K-means clustering deal with outliers in the dataset?

- a) Treats outliers as centroids
- b) **Ignores outliers**
- c) Assigns outliers to nearest cluster
- d) Removes outliers from the dataset

In hierarchical clustering, what is the role of a dendrogram?

- a) Identifying outliers
- b) **Visualizing cluster hierarchy**
- c) Dimensionality reduction
- d) Feature engineering

How does DBSCAN clustering handle clusters of varying shapes and sizes?

- a) Uniform cluster shapes
- b) Assumes clusters are spherical
- c) **Adapts to varying cluster structures**
- d) Requires predefined cluster shapes

What is the main advantage of using t-SNE over PCA for dimensionality reduction?

- a) Faster computation
- b) **Preserves local similarities**
- c) Better for large datasets
- d) Ignores outliers

What does the WSS value represent in K-means clustering analysis?

- a) **Cluster compactness**
- b) Model complexity
- c) Feature importance
- d) Data preprocessing



What is the primary objective of hierarchical clustering analysis?

- a) Assigning data to clusters
- b) **Visualizing cluster hierarchy**
- c) Removing outliers from dataset
- d) Feature engineering

How does the silhouette score measure the quality of clustering results?

- a) **Cluster compactness**
- b) Model complexity
- c) Feature importance
- d) Data preprocessing

In clustering case studies, what is the primary consideration when selecting a distance metric for hierarchical clustering?

- a) Feature importance
- b) Model interpretability
- c) Data preprocessing
- d) **Similarity between data points**

What is the main advantage of DBSCAN clustering over K-means clustering?

- a) **Suitable for large datasets**
- b) Simplicity of implementation
- c) Assumes spherical clusters
- d) Requires predefined cluster number

What is the primary purpose of implementing smoothing models on time series data?

- a) Increase model complexity
- b) **Reduce noise in data**
- c) Improve feature importance
- d) Enhance data visualization

In time series analysis, what does Auto-correlation (ACF) measure?

- a) **Similarity between data points**
- b) Model complexity
- c) Feature importance
- d) Data preprocessing

What is the significance of the Moving Average Models in time series analysis?

- a) Identifying outliers
- b) **Capturing trend over time**
- c) Reducing model interpretability
- d) Enhancing feature selection

Explain the difference between ARMA and ARIMA models in time series analysis.

- a) ARMA includes seasonality, ARIMA does not
- b) ARMA has a trend, ARIMA is stationary

- c) ARMA is for time series, ARIMA is for regression
- d) **ARMA includes autoregression, ARIMA includes moving average**

How is Auto-correlation (ACF) calculated in time series analysis?

- a) Using moving averages
- b) By finding the slope of the curve
- c) **Using lagged observations**
- d) Through exponential smoothing

What is the primary purpose of ROC (Receiver Operating Characteristic) in algorithm performance metrics?

- a) Assessing model accuracy
- b) Evaluating feature importance
- c) **Comparing true positives and negatives**
- d) Measuring data preprocessing

How does the F1 Score account for precision and recall in classification problems?

- a) **Precision / Recall**
- b) Precision \* Recall
- c) Precision + Recall
- d) Precision – Recall

What metric is used to evaluate the effectiveness of collaborative filtering in recommendation systems?

- a) RMSE (Root Mean Squared Error)
- b) **Precision at K**
- c) Mean Reciprocal Rank (MRR)
- d) Area Under the Curve (AUC)

In anomaly detection, what does the isolation forest algorithm aim to identify?

- a) Normal patterns in the data
- b) Contextual anomalies
- c) Collective anomalies
- d) **Outliers in the dataset**

What is the primary objective of using ML algorithms in Credit Card Fraud Analysis?

- a) Increasing computational speed
- b) **Identifying fraudulent transactions**
- c) Improving feature selection
- d) Reducing model complexity