Machine Learning MCQ Questions and Answers

Computer science (Shivaji University)

Machine Learning MCQ Questions and Answers

1) What is machine learning ?

- A. Machine learning is the science of getting computers to act without being explicitly programmed.
- B.Machine Learning is a Form of AI that Enables a System to Learn from Data.
- C.Both A and B
- D.None of the above

2) Machine learning is an application of _____.

- A. Blockchain
- B.Artificial Intelligence
- C.Both A and B
- D.None of the above

3) Application of Machine learning is _____.

- A. email filtering
- B.sentimental analysis
- C.face recognition
- D.All of the above

4) The term machine learning was coined in which year?

- A. 1958
- B.1959
- C.1960
- D.1961

5) Machine learning approaches can be traditionally categorized into _____ categories.

- A. 3
- B.4
- C.7
- D.9

6) The categories in which Machine learning approaches can be traditionally categorized are _____ .

- A. Supervised learning
- B.Unsupervised learning
- C.Reinforcement learning
- D.All of the above

7) _____ is the machine learning algorithms that can be used with labeled data.

- A. Regression algorithms
- B.Clustering algorithms
- C.Association algorithms
- D.All of the above

8) _____ is the machine learning algorithms that can be used with unlabeled data.

- A. Regression algorithms
- B.Clustering algorithms
- C.Instance-based algorithms
- D.All of the above

9) The Real-world machine learning use cases are _____.

- A. Digital assistants
- B.Chatbots
- C.Fraud detection
- D.All of the above

10) Which among the following algorithms are used in Machine learning?

- A. Naive Bayes
- B.Support Vector Machines
- C.K-Nearest Neighbors
- D.All of the above

11) _____ are the techniques of keyword normalization

- A. Lemmatization
- B.Stemming
- C.Both A and B
- D.None of the above

12) Replace missing values with mean/median/mode helps to handle missing or corrupted data in a dataset. True/False?

- A. True
- B.False

13) _____ is a disadvantage of decision trees?

- A. Decision trees are robust to outliers
- B.Decision trees are prone to be overfit
- C.Both A and B
- D.None of the above

14) _____ is a part of machine learning that works with neural networks.

- A. Artificial inteligence
- B.Deep learning
- C.Both A and B
- D.None of the above

15) Overfitting is a type of modelling error which results in the failure to predict future observations effectively or fit additional data in the existing model. Yes/No?

- A. Yes
- B.No
- C.May be
- D.Can't say

16) _____ is used as an input to the machine learning model for training and prediction purposes.

- A. Feature
- B.Feature Vector
- C.Both A and B
- D.None of the above

17) _____ is the scenario when the model fails to decipher the underlying trend in the input data.

- A. Overfitting
- B.Underfitting
- C.Both A and B
- D.None of the above

18) Which Language is Best for Machine Learning?

- A. C
- B.Java
- C.Python
- D.HTML

19) The supervised learning problems can be grouped as _____.

- A. Regression problems
- B.Classification problems
- C.Both A and B
- D.None of the above

20) The unsupervised learning problems can be grouped as _____.

- A. Clustering
- B.Association
- C.Both A and B
- D.None of the above

21) Automatic Speech Recognition systems find a wide variety of applications in the _____ domains.

- A. Medical Assistance
- B.Industrial Robotics
- C.Defence & Aviation
- D.All of the above

22) The term machine learning was coined by _____.

- A. James Gosling
- B.Arthur Samuel
- C.Guido van Rossum
- D.None of the above

23) Machine Learning can automate many tasks, especially the ones that only humans can perform with their innate intelligence.

- A. True
- B.False

24) Features of Machine Learning are_____.

- A. Automation
- B.Improved customer experience
- C.Business intelligence
- D.All of the above

25) Which machine learning models are trained to make a series of decisions based on the rewards and feedback they receive for their actions?

- A. Supervised learning
- B.Unsupervised learning
- C.Reinforcement learning
- D.All of the above

1) Regression discovers causal relationships.

- **A.** True
- **B.**False

2) Missing data items are ..... with Bayes classifier.

- **A.** Ignored
- **B.**Treated as equal compares
- **C.**Treated as unequal compares.
- **D.**Replaced with a default value.

3) A model of language consists of the categories, does not include .....

- **A.** Language units
- **B.**Structural units
- **C.**System constraints
- **D.**Role structure of units

4) What is the output of training process in machine learning?

- **A.** Null
- **B.**Accuracy
- **C.**Machine learning model
- **D.**Machine learning algorithm

Next Question

5) Supervised learning and unsupervised clustering both require at least one .....

- **A.** Input attribute
- **B.**Output attribute
- **C.**Hidden attribute
- **D.**Categorical attribute

6) Machine learning is a subset of .....

- **A.** Deep Learning
- **B.**Artificial Intelligence
- **C.**Data Learining
- **D.**None of the above

7) What is the most common issue when using Machine Learning?

- **A.** Poor Data Quality
- **B.**Lack of skilled resources
- **C.**Inadequate Infrastructure
- **D.**None of the above

8) Real-Time decisions, Game AI, Learning Tasks, Skill acquisition, and Robot Navigation are applications of .....

- **A.** Reinforcement Learning
- **B.**Supervised Learning: Classification
- **C.**Unsupervised Learning: Regression
- **D.**None of the above

9) The Bayes rule can be used in .....

- **A.** Solving queries
- **B.**Increasing complexity
- **C.**Decreasing complexity
- **D.**Answering probabilistic query

10) Which one in the following is not Machine Learning disciplines?

- **A.** Physics
- **B.**Information Theory
- **C.**Neurostatistics
- **D.**Optimization Control

11) What are the three types of Machine Learning?

- **A.** Supervised Learning
- **B.**Unsupervised Learning
- **C.**Reinforcement Learning
- **D.**All of the above

12) What is called the average squared difference between classifier predicted output and actual output?

- **A.** Mean relative error
- **B.**Mean squared error
- **C.**Mean absolute error
- **D.**Root mean squared error

13) ..... algorithms enable the computers to learn from data, and even improve themselves, without being explicitly programmed.

- **A.** Deep Learning
- **B.**Machine Learning
- **C.**Artificial Intelligence
- **D.**None of the above

14) What is the most significant phase in a genetic algorithm?

- **A.** Selection
- **B.**Mutation
- **C.**Crossover
- **D.**Fitness function

15) In Machine learning the module that must solve the given performance task is known as .....

- **A.** Critic
- **B.**Generalizer
- **C.**Performance system
- **D.**All of these

16) Which of the following is not a supervised learning?

- **A.** PCA
- **B.**Naive Bayesian
- **C.**Linear Regression
- **D.**Decision Tree Answer

17) Machine Learning is a field of AI consisting of learning algorithms that .....

- **A.** At executing some task
- **B.**Over time with experience
- **C.**Improve their performance
- **D.**All of the above

18) Which methods are used for the calibration in Supervised Learning?

- **A.** Platt Calibration
- **B.**Isotonic Regression

- **C.**Both Platt Calibration & Isotonic Regression
- **D.**None of the above

19) What is the disadvantage of decision trees?

- **A.** Factor analysis
- **B.**Decision trees are robust to outliers
- **C.**Decision trees are prone to be overfit
- **D.**All of the above

20) Logistic regression is a ..... regression technique that is used to model data having a ..... outcome.

- **A.** Linear, binary
- **B.**Linear, numeric
- **C.**Nonlinear, binary
- **D.**Nonlinear, numeric

1. Application of machine learning methods to large databases is called

A. data mining.

B. artificial intelligence

C. big data computing

D. internet of things

discuss

A.data mining.

2. If machine learning model output involves target variable then that model is called as

A. descriptive model

B. predictive model

C. reinforcement learning

D. all of the above

discuss

B.predictive model

3. In what type of learning labelled training data is used

A. unsupervised learning

B. supervised learning

C. reinforcement learning

D. active learning

discuss

B.supervised learning

4. In following type of feature selection method we start with empty feature set

A. forward feature selection

B. backword feature selection

C. both a and b??

D. none of the above

discuss

A.forward feature selection

5. In PCA the number of input dimensiona are equal to principal components

A. true

B. false

discuss

A.true

6. PCA can be used for projecting and visualizing data in lower dimensions.

A. true

B. false

discuss

A.true

7. Which of the following is the best machine learning method?

A. scalable

B. accuracy

C. fast

D. all of the above

discuss

D.all of the above

8. What characterize unlabeled examples in machine learning

A. there is no prior knowledge

B. there is no confusing knowledge

C. there is prior knowledge

D. there is plenty of confusing knowledge

discuss

D.there is plenty of confusing knowledge

9. What does dimensionality reduction reduce?

A. stochastics

B. collinerity

C. performance

D. entropy

discuss

B.collinerity

10. Data used to build a data mining model.

A. training data

B. validation data

C. test data

D. hidden data

discuss

A.training data

11. The problem of finding hidden structure in unlabeled data is called…

A. supervised learning

B. unsupervised learning

C. reinforcement learning

D. none of the above

discuss

B. unsupervised learning

12. Of the Following Examples, Which would you address using an supervised learning Algorithm?

A. given email labeled as spam or not spam, learn a spam filter

B. given a set of news articles found on the web, group them into set of articles about the same story.

C. given a database of customer data, automatically discover market segments and group customers into different market segments.

D. find the patterns in market basket analysis

discuss

A.given email labeled as spam or not spam, learn a spam filter

13. Dimensionality Reduction Algorithms are one of the possible ways to reduce the computation time required to build a model

A. true

B. false

discuss

A.true

14. You are given reviews of few netflix series marked as positive, negative and neutral. Classifying reviews of a new netflix series is an example of

A. supervised learning

B. unsupervised learning

C. semisupervised learning

D. reinforcement learning

discuss

A.supervised learning

15. Which of the following is a good test dataset characteristic?

A. large enough to yield meaningful results

B. is representative of the dataset as a whole

C. both a and b

D. none of the above

discuss

C.both a and b

16. Following are the types of supervised learning

A. classification

B. regression

C. subgroup discovery

D. all of the above

discuss

D.all of the above

17. Type of matrix decomposition model is

A. descriptive model

B. predictive model

C. logical model

D. none of the above

discuss

A.descriptive model

18. Following is powerful distance metrics used by Geometric model

A. euclidean distance

B. manhattan distance

C. both a and b??

D. square distance

discuss

C.both a and b??

19. The output of training process in machine learning is

A. machine learning model

B. machine learning algorithm

C. null

D. accuracy

discuss

A.machine learning model

20. A feature F1 can take certain value: A, B, C, D, E, & F and represents grade of students from a college. Here feature type is

A. nominal

B. ordinal

C. categorical

D. boolean

discuss

B.ordinal

21. PCA is

A. forward feature selection

B. backword feature selection

C. feature extraction

D. all of the above

discuss

C.feature extraction

22. Dimensionality reduction algorithms are one of the possible ways to reduce the computation time required to build a model.

A. true

B. false

discuss

A.true

23. Which of the following techniques would perform better for reducing dimensions of a data set?

A. removing columns which have too many missing values

B. removing columns which have high variance in data

C. removing columns with dissimilar data trends

D. none of these

discuss

A.removing columns which have too many missing values

24. Supervised learning and unsupervised clustering both require which is correct according to the statement.

A. output attribute.

B. hidden attribute.

C. input attribute.

D. categorical attribute

discuss

C. input attribute.

25. What characterize is hyperplance in geometrical model of machine learning?

A. a plane with 1 dimensional fewer than number of input attributes

B. a plane with 2 dimensional fewer than number of input attributes

C. a plane with 1 dimensional more than number of input attributes

D. a plane with 2 dimensional more than number of input attributes

discuss

B.a plane with 2 dimensional fewer than number of input attributes