ML What is true about Machine Learning?

- Machine Learning (ML) is that field of computer science
- ML is a type of artificial intelligence that extract patterns out of raw data by using an algorithm or method
- The main focus of ML is to allow computer systems learn from experience without being explicitly programmed or human intervention.
- **All of the above**

1. ML is a field of AI consisting of learning algorithms that?

**At executing some task**

2. Different learning methods does not include?

- **Introduction**
- **Analogy**
- **Deduction**
- **Memorization**

**Introduction**

3. A model of language consists of the categories which does not include _____.

- **System Unit**
- **structural units.**
- **data units**
- **empirical units**

**structural units.**

4. Which of the following is a widely used and effective machine learning algorithm based on the idea of bagging?

- **Decision Tree**
- **Regression**
- **Classification**
- **Random Forest**

**Random Forest**

5. Which of the following are ML methods?

- **based on human supervision**
- **supervised Learning**
- **semi-reinforcement Learning**
- **All of the above**

**based on human supervision**

6. To find the minimum or the maximum of a function, we set the gradient to zero because:

- **The value of the gradient at extrema of a function is always zero**
- **Depends on the type of problem**
- **Both A and B**
- **None of the above**

**The value of the gradient at extrema of a function is always zero**

7. The action _____ of a robot arm specify to Place block A on block B

- **STACK(A,B)**
- **LIST(A,B)**
- **QUEUE(A,B)**
- **ARRAY(A,B)**

**STACK(A,B)**

8. p ? 0q is not a?

- **hack clause**
- **horn clause**
- **structural clause**
- **system clause**

**horn clause**

9. A_____ begins by hypothesizing a sentence (the symbol S) and successively predicting lower level constituents until individual preterminal symbols are written.

- **bottow-up parser**
- **top parser**
- **top-down parser**
- **bottom parser**

**top-down parser**

11. The model will be trained with data in one single batch is known as ?

- Batch learning
- Offline learning
- Both A and B
- None of the above

**Both A and B**

12. In Model based learning methods, an iterative process takes place on the ML models that are built based on various model parameters, called ?

- mini-batches
- optimizedparameters
- hyperparameters
- superparameters

**hyperparameters**

13. Which of the following statements about regularization is not correct?

- Using too large a value of lambda can cause your hypothesis to underfit the data.
- Using too large a value of lambda can cause your hypothesis to overfit the data
- Using a very large value of lambda cannot hurt the performance of your hypothesis

- None of the above

**None of the above**

14. How do you handle missing or corrupted data in a dataset?

- Drop missing rows or columns
- Replace missing values with mean/median/mode
- Assign a unique category to missing values
- All of the above

**All of the above**

15. When performing regression or classification, which of the following is the correct way to preprocess the data?

- Normalize the data -> PCA -> training
- PCA -> normalize PCA output -> training
- Normalize the data -> PCA -> normalize PCA output -> training
- None of the above

**Normalize the data -> PCA -> training**

16. Which of the following is a disadvantage of decision trees?

**Decision trees are prone to be overfit**

17. Which of the following is a reasonable way to select the number of principal components "k"?

**Choose k to be the smallest value so that at least 99% of the varinace is retained**

18. High entropy means that the partitions in classification are

**not pure**

19. What is a sentence parser typically used for?

**It is used to parse sentences to derive their most likely syntax tree structures.**

20.Which of the following techniques can not be used for normalization in text mining?

**Stop Word Removal**

21. Which of the following is NOT supervised learning?

- **PCA**
- **Decision Tree**
- **Linear Regression**
- **Naive Bayesian**

**PCA**

22. Suppose we would like to perform clustering on spatial data such as the geometrical locations of houses. We wish to produce clusters of many different sizes and shapes. Which of the following methods is the most appropriate?

- **Decision Trees**
- **Density-based clustering**
- **Model-based clustering**
- **K-means clustering**

**Density-based clustering**

23. What is the purpose of performing cross-validation?

- **To assess the predictive performance of the models**
- **To judge how the trained model performs outside the sample on test data**
- **both 1 and 2**

**To assess the predictive performance of the models**

25. How do you handle missing or corrupted data in a dataset?

- **Drop missing rows or columns**

- **Replace missing values with mean/median/mode**
- **Assign a unique category to missing values**
- **All of the above -**

**All of the above -**

Part 2

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

Artificial Intelligence
**Machine Learning**
Deep Learning
Traditional Learning

- _____ is a category of an algorithm that allows software applications to become more accurate in predicting outcomes without being explicitly programmed.

Artificial Intelligence
**Machine Learning**
Deep Learning
Traditional Learning

- What device below is not an example of Machine Learning?

Wearable fitness tracker
Google Assistant
Speech to Text
Google Search
**None of the above**

- Check/Click all which uses Machine Learning below.

**Prediction**
**Image Recognition**
**Face Recognition**
**Medical Diagnoses**
Feeding the newborn

- What year was the E.N.I.A.C. first invented?

1904
1914
**1940**
1490

- What year did Artifical Intelligence first stirred excitement?

1905
**1950**
1590
1915

- What year did Machine Learning began to flourish?

**1980**
1918
1908
1890

- What year did Deep Learning breakthroughs drove A.I. (Artificial Intelligence) boom?

**2010**
2009
2001
2008

- What doe ENIAC stands for?

Electric Number Intersect A Calculator
**Electronic Numerical Integrator and Computer**
Engineering Numbering Into Auto Correct
Enter Number In Auto Correct

- Who invented the Perceptron which was a very, very simple classifier but when it was combined in large numbers, in a network, it became a powerful monster?

Frank Rosemarie
Frank Rosenblet
**Frank Rosenblatt**
Frank Rosenbat

- I.B.M.'s _____ system beat the world champion of chess, the grand-master.

Deep Sea
Deep Ocean
Deep Lake
**Deep Blue**

- Who is the Chess grand master beaten in a game by I.B.M.'s system?

Gary Kapov
Garry Kasper
**Gary Kasparov**
Gary Kerpov

- What are the three types of Machine Learning? Choose three.

**Supervised Learning**
Learning Differentiated
**Unsupervised Learning**
**Reinforcement Learning**
Technical Learning

- What are the two types of Supervised Learning?

**Classification**
Declassification
Progression
**Regression**

- What are the two types of Unsupervised Learning?

Loitering
**Clustering**
**Association**
Dissociation

- This type of Machine Learning learns by interacting with its environment. The agent receives rewards by performing correctly and penalties for performing incorrectly. The agent learns without intervention from a human by maximizing its reward and minimizing its penalty. It is a type of dynamic programming that trains algorithms using a system of reward and punishment.

Supervised Learning
Unsupervised Learning
Learning and Teaching
**Reinforcement Learning**

- In this type of Machine Learning, an AI system is presented with unlabeled, uncategorized data and the system’s algorithms act on the data without prior training. The output is dependent upon the coded algorithms.

Supervised Learning
**Unsupervised Learning**
Reinforcement Learning
Technique Learning

- In this kind of Machine Learning, an AI system is presented with data which is labeled, which means that each data tagged with the correct label.

**Supervised Learning**
Unsupervised Learning
Reinforcement Learning
Learning and Techniques
Timer (with selected value) 10 seconds

- What is "ML"?

answer choices
Maternity Leave
Mixed Language
Missing Link
**Machine Language**

- *Tom Mitchell of Carnegie Mellon University said that, "A computer program is said to learn from experience E with respect to some "T" and some performance measure P, if its performance on T, as measured by P, improves with experience E." What is "T"?*

Time
Test
**Task**
Temper

- What is Machine Learning? (Choose 3 Answers)

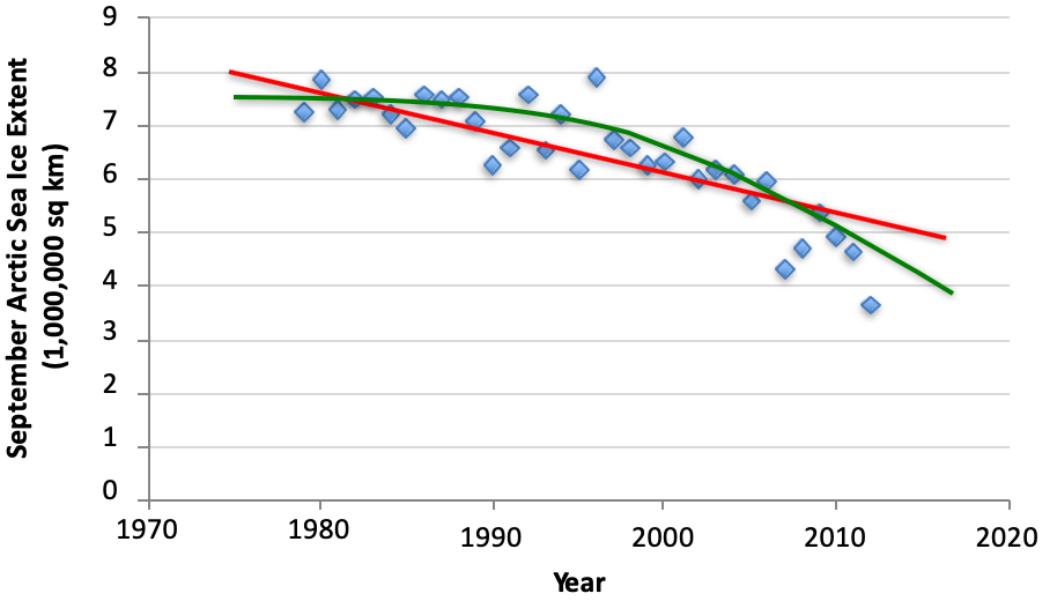
**Artificial Intelligence**
**Machine Learning**
Data Statistics
**Deep Learning**

- Which one in the following is not Machine Learning disciplines?

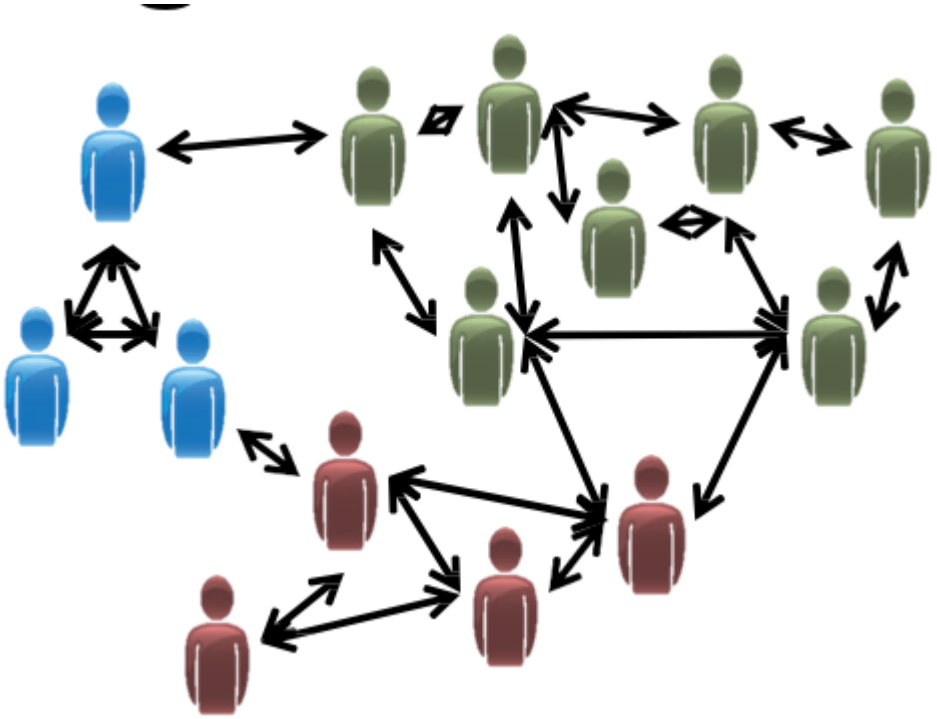
Information Theory
**Neurostatistics**
Optimization + Control
Physics

- Which of the following is not type of learning?

**Semi-unsupervised Learning**
Unsupervised Learning
Supervised Learning
Reinforcement Learning




This picture shows a result of ...
Supervised Learning: Classification
Unsupervised Learning: Regression
Unsupervised Learning: Prediction
**Supervised Learning: Regression**



Q.
This picture shows an application of ...
answer choices
Supervised Learning: Classification
**Unsupervised Learning: Clustering**
Unsupervised Learning: Prediction
Supervised Learning: Regression