

Unit 14 - Week 10: Machine Learning -I

Course outline

How to access the portal

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Week 1: AI and AI Problem Solving

Week 2: Problem Solving by Search - I

Week 3: Problem Solving by Search - II

Week 4: Knowledge Representation and Reasoning - I

Week 5: Knowledge Representation and Reasoning - II

Live Session-1

Week 6: Knowledge Representation and Reasoning - III

Week 7: Reasoning under Uncertainty

Week 8: Planning

Week 9: Planning and Decision Making

Live Session-2

Week 10: Machine Learning -I

Lec 1: Introduction to Machine Learning

Lec 2: Learning Decision Trees

Quiz : Assignment 10

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Assignment 10

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2019-10-09, 23:59 IST.

1) Who is recognized for developing the first machine learning program, capable of playing and winning checkers? **1 point**

- A. John McCarthy
 B. Arthur Samuel
 C. Herbert Simon
 D. Tom M. Mitchell

No, the answer is incorrect.
Score: 0

Accepted Answers:
B. Arthur Samuel

2) The approach for modeling the relationship between a scalar dependent variable Y and one or more explanatory variables (or independent variables) denoted X is _____ **1 point**

- A. Regression
 B. Classification
 C. Clustering
 D. Matching

No, the answer is incorrect.
Score: 0

Accepted Answers:
A. Regression

3) Of the two strands of Artificial Intelligence activity, the one that seeks to understand how intelligent behaviour arises is the _____ **1 point**

- A. Cognitive approach
 B. Engineering approach
 C. Machine Learning approach
 D. Symbolic approach

No, the answer is incorrect.
Score: 0

Accepted Answers:
A. Cognitive approach

4) Which of the following statements are correct for Machine Learning vis-à-vis Statistics? **1 point**

- I. Machine learning deals with Low-dimensional data [e.g. less than 100 D].
 II. Huge amount of structure in the data; methods involve figuring out a way to represent this structure.

- A. Statements I and II
 B. Only Statement II
 C. Only Statement I
 D. None

No, the answer is incorrect.
Score: 0

Accepted Answers:
B. Only Statement II

5) Machine learning algorithm that attempt to estimate the mapping function from the input variables to discrete or categorical output variables **1 point**

- A. Classification
 B. Clustering
 C. Matching
 D. Regression

No, the answer is incorrect.
Score: 0

Accepted Answers:
A. Classification

6) Information content is the average information per message. Information content is also called _____. **1 point**

- A. Common Knowledge
 B. Entropy.
 C. Knowledge
 D. Information gain

No, the answer is incorrect.
Score: 0

Accepted Answers:
B. Entropy.

7) In pure inductive inference, given a collection of examples of f, return a function h that approximates f. The function h is called a _____. **1 point**

- A. utility function.
 B. hypothesis
 C. approximation function
 D. classifier

No, the answer is incorrect.
Score: 0

Accepted Answers:
B. hypothesis

8) To implement Choose-Attribute in the DTL algorithm, we need a formal measure of "fairly good" and "really useless". _____ provides a mathematical basis for measuring the information content. **1 point**

- A. Information Theory
 B. Utility Theory.
 C. Decision Theory
 D. Probability Theory

No, the answer is incorrect.
Score: 0

Accepted Answers:
A. Information Theory

Q9 – Q10. Architecture of a learning agent has FOUR components. Learning refers to the capability of autonomous acquisition and integration of knowledge.

9) The _____ ensures exploration; suggests actions that might lead to new experiences. **1 point**

- A. Learning element.
 B. Performance element.
 C. Problem generator.
 D. Critic.

No, the answer is incorrect.
Score: 0

Accepted Answers:
C. Problem generator.

10) This element selects external actions and drives the learning element; collects percepts, decides on actions. **1 point**

- A. Learning element.
 B. Performance element.
 C. Problem generator.
 D. Critic.

No, the answer is incorrect.
Score: 0

Accepted Answers:
B. Performance element.