

English 2 Exam - Correction

Machine Learning

While artificial intelligence (AI) is the broad science of mimicking human abilities, machine learning is a specific subset of AI that trains a machine how to learn from data, identify patterns and make decisions with minimal human intervention by automating analytical model building.

Because of new computing technologies, machine learning today is not like machine learning of the past. It was born from pattern recognition and the theory that computers can learn without being programmed to perform specific tasks; researchers interested in artificial intelligence wanted to see if computers could learn from data. The iterative aspect of machine learning is important because as models are exposed to new data, they are able to independently adapt. They learn from previous computations to produce reliable, repeatable decisions and results. It's a science that's not new – but one that has gained fresh momentum.

Here are a few widely publicized examples of machine learning applications you may be familiar with:

- The heavily hyped, self-driving Google car? The essence of machine learning.
- Online recommendation offers such as those from Amazon and Netflix? Machine learning applications for everyday life.
- Knowing what customers are saying about you on Twitter? Machine learning combined with linguistic rule creation.
- Fraud detection? One of the more obvious, important uses in our world today.

Questions:

Part I: Comprehension (10 pts)

1) Read carefully the text above and suggest a title for each paragraph: (1.5 pts)

.....1) *Definition of Machine Learning*.....

.....2) *Evolution of Machine Learning*.....

.....3) *Examples of Machine Learning applications*.....

2) Answer the following questions according to the text: (3 pts)

a) What is machine learning? *Machine learning is a specific subset of AI that trains a machine how to learn from data, identify patterns and make decisions with minimal human intervention by automating analytical model building.*

b) Name three applications of machine learning (*not mentioned in the text*)? *Face recognition, emotion recognition, violence detection, predicting weather, predicting words in Google search... etc.*

3) Find the words in the text that mean: (2 pts)

1. Repetitive (2§) = iterative 2. imitating (1§) = mimicking

4) Find in the text the opposites of these words: (2 pts)

1) Inessential (3§) ≠ important 2) narrowly (3§) ≠ widely

6) Find in the text the English translation of the words below: (1.5 pts)

1) La reconnaissance de formes (2§) = pattern recognition

2) Capacités (1§) = abilities 3) fiable (2§) = reliable

Part II: Scientific writing (10 pts)

1) Rewrite the following sentences, combining them with relative pronouns. (4 pts)

a) Performing machine learning involves creating a model. The model is trained on some data to make predictions.

*Performing machine learning involves creating a model **which** is trained on some data to make predictions.*

b) *Arthur L. Samuel* was an American pioneer in the field of computer gaming and AI. He popularized the term "machine learning".

*Arthur L. Samuel , **who** popularized the term "machine learning", was an American pioneer in the field of computer gaming and AI*

2) Are the following statements *True* or *False*? (6 pts)

- a) A scientific paper is a written report describing an original research results. (*True*)
- b) A scientific paper should have, in proper order, a Title, Abstract, Introduction, Materials and Methods, and Discussion. (*True*)
- c) There is only one style used by journals for referencing information. (*False*)
- d) In scientific writing, overuse of passive voice or use of passive voice in long and complicated sentences is preferable. (*False*)
- e) The abstract should state the principal objectives and scope of the investigation. (*True*)
- f) The main purpose of the Materials and Methods section is to provide enough detail for a competent worker to repeat your study and reproduce the results. (*True*)

Good Luck