## Module 1 Quiz

Quiz, 10 questions

## **X** Try again once you are ready.

Required to pass: 80% or higher

You can retake this quiz up to 3 times every 8 hours.

Back to Week 1

Retake



1/1 points

1\_

Select all correct answers:

Artificial Intelligence (AI) deals with machines that achieve a human-level performance at specific tasks such as face or speech recognition, machine translation, credit approvals, etc.



#### Correct

This is a correct answer.

Data Science uses statistics and ML to monetize information in data.

#### Correct

This is a correct answer.

Machine Learning (ML) is a sub-field of Al that teaches computers to perform tasks from experience.

## Correct

This is a correct answer.

Machine Intelligence aims at a symbiosis of Al and human intelligence.

## Un-selected is correct

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	0.80 / 1 points
	2.
	Select all correct answers:
	A rational Al agent should not use any built-in knowledge about its environment.
	This should not be selected  This is an incorrect answer. Please review the lecture on artificial intelligence and machine learning, part II.
	All studies intelligent agents that perceive their environment and perform actions to solve tasks that involve mimicking cognitive functions of humans.
	Correct This is a correct answer.
	A rational Al agent should select actions that are expected to maximize its performance measure.
	Correct This is a correct answer.
	A rational Al agent should select a performance measure that allows it to compute optimal actions in a most efficient way.
	Un-selected is correct
	Al agents can perceive a physical environment in real time via sensors, or by reading digital data collected from an environment.

### Correct

This is a correct answer.

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1/1 points

What is the goal of learning in Machine Learning?

- Specifically for Finance, the goal of learning is to learn how to make the most money in a shortest time.
- The goal of learning is to store all information relevant for your business problem, so that you would be able to quickly find it when needed.
- The goal of learning is the ability to generalize from data.

#### Correct

This is the correct answer.

0.75 / 1 points

#### 4.

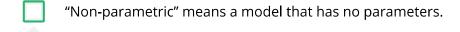
Select all correct answers

Machine Learning methods are focused on inferring causal relationships.



#### This should not be selected

This is an incorrect answer. Please review video lectures of this week.



#### **Un-selected** is correct



7/7/2018	Guided Tour of Machine Learning in Finance - Home   Coursera
////2010	Scalability of Machine Learning methods is often a major concern in industrial applications.
Module 1 Qu	Z
Quiz, 10 questions	Correct This is a correct answer.
	Machine Learning deals with both probabilistic and non-probabilistic methods.
	Correct This is a correct answer.
	0 / 1 points

5.

Choose all correct statements:

Reinforcement Learning forces Unsupervised Learning algorithms to behave in a similar way to Supervised Learning algorithms using the latest groundbreaking research in Deep Learning.

#### This should not be selected

This is an incorrect answer. Please review the lecture on Machine Learning as a Foundation of Artificial Intelligence, Part II.

Most of available data for Machine Learning is unsupervised data.

#### This should be selected

Reinforcement Learning is in a sense an intermediate case between Supervised and Unsupervised Learning, as some feedback about right actions is available, but it is incomplete.

This should be selected

0.75 / 1 points

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Pick all correct statements:

	Clustering could also be thought as a special type of Representation Learning when the output space is a discrete set.	
Corre	ct	
Corre	ect!	
	The difference between (direct) Reinforcement Learning and Inverse Reinforcement Learning is that in the latter case, there is no information about rewards received by the agent.	
This s	hould be selected	
	Modern ML packages unify Supervised and Unsupervised algorithms using generic APIs: if you replace all labels in a dataset by NaNs (Not a Number), the algorithm will assume that your problem is an Unsupervised Learning problem.	
Un-se	lected is correct	
	Both clustering and classification construct a map of a multi- dimensional input vector onto a discrete set of labels. The only	
	difference is that for classification, there are class labels that make the problem an example of Supervised Learning, while clustering is an example of Unsupervised Learning.	
Corre	ct	
Correct!		



1/1 points

7.

Pick all correct statements.

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All types of Machine Learning algorithms can be implemented via neural networks, hence they offer a universal framework.

#### Correct

Correct!

In the name "Deep Learning", the word "Deep" refers to new ideas that came to Computer Science from Physics around 2006-2007.
As Neural Networks won in all applications they have been tried on so far, Neural Networks is all I need to learn in Machine Learning.



0/1 points

8.

Which of these statements are correct?

Modeling corporate defaults is an exercise in Unsupervised Learning because we do not know the future.

## This should be selected

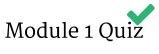
Reinforcement Learning is a suitable framework for portfolio optimization, even though it can also be done with Supervised Learning using some pre-specified models of the world.

#### This should be selected

Regime-change detection is a Supervised Learning task, as we always know the regime for each given day.

#### This should not be selected

This is an incorrect answer. Please review the video lectures. Check Machine Learning in Finance vs Machine Learning in Tech, Part I.



1/1 points

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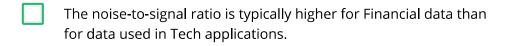
11Z	p 5		
9.			
Why can perception tasks in Finance involve Reinforcement Learning?			
	Simply by induction: As Reinforcement Learning is a sort of Deep Learning, and Deep Learning always beats any other ML algorithms, it follows that all perception tasks in Finance should better start with Reinforcement Learning.		
	All this is a way too abstract stuff for me. Can we move on to TensorFlow demos please?		
0	In Finance, expectations regarding the future are sometimes embedded in perception of today's environment. If this future is influenced by actions of rational agents, Reinforcement Learning might be an appropriate framework.		
Corre	ect		
Corr			
<b>~</b>	1/1 points		
	e all correct answers: What are the main differences between Machineng in Finance and Machine Learning in Tech?		
	In Finance, relevant data is often of a medium-to-large size.		
<b>Corr</b> o	ect is a correct answer.		
	There are no differences, really. The Gradient Boosting algorithm always works. Now, can you show us some TensorFlow demos, please?		
ln-s	elected is correct		
On-Selected is confect			

Financial data is typically non-stationary.

#### Correct

# $Module\ 1\ Quiz \ {\it This}\ {\it is\ a\ correct\ answer}.$

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#### Correct

This is a correct answer.





