

Unit 3 - Week 1

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Assignment 1

The due date for submitting this assignment has passed. **Due on 2019-08-14, 23:59 IST.**
 As per our records you have not submitted this assignment.

- You are given reviews of few movies marked as positive, negative or neutral. Classifying reviews of a new movie is an example of**

 - Supervised learning
 - Unsupervised learning
 - Semi-Supervised learning
 - Reinforcement learning

☐ a
☐ b
☐ c
☐ d

No, the answer is incorrect.
Score: 0
Accepted Answers: a
- The selling price of a house depends on the following factors. For example, it depends on the number of bedrooms, number of kitchen, number of bathrooms, the year the house was built and the square footage of the lot. Given these factors, predicting the selling price of the house is an example of _____ task.**

 - Binary Classification
 - Multilabel Classification
 - Simple Linear Regression
 - Multiple Linear Regression

☐ a
☐ b
☐ c
☐ d

No, the answer is incorrect.
Score: 0
Accepted Answers: d
- A student grade is a variable F1 which can take values from : A, B, C, D, E & F.**

Which of the following statements is true in the following case?

 - Variable F1 is an example of nominal variable.
 - Variable F1 is an example of ordinal variable.
 - It doesn't belong to any of the above category.
 - None of the above

☐ a
☐ b
☐ c
☐ d

No, the answer is incorrect.
Score: 0
Accepted Answers: b
- Regarding bias and variance, which of the following statements are true? (Here 'high' and 'low' are relative to the ideal model.)**

 - Models which overfit are more likely to have high bias
 - Models which overfit are more likely to have low bias
 - Models which overfit are more likely to have high variance
 - Models which overfit are more likely to have low variance

☐ a
☐ b
☐ c
☐ d

No, the answer is incorrect.
Score: 0
Accepted Answers: b
c
- During the treatment of cancer patients, the doctor needs to be very careful about which patients need to be given chemotherapy. Which metric should we use in order to decide the patients who should be given chemotherapy?**

 - Precision
 - Recall

☐ a
☐ b

No, the answer is incorrect.
Score: 0
Accepted Answers: a
- Imagine a newly-born starts to learn walking. It will try to find a suitable policy to learn walking after repeated falling and getting up. Specify what type of machine learning algorithm is best suited to do the same.**

 - Supervised Learning
 - Unsupervised Learning
 - Reinforcement Learning
 - Semi-supervised Learning

☐ a
☐ b
☐ c
☐ d

No, the answer is incorrect.
Score: 0
Accepted Answers: c
- Cross validation is a model evaluation method. **Leave-one-out cross validation**(LOOCV) is K-fold cross validation taken to its logical extreme, with K equal to N, the number of data points in the set. That means that N separate times, the function approximator is trained on all the data except for one point and a prediction is made for that point. Thus, it iterates over the other datapoints keeping the rest of the dataset fixed. What can be the major issues in LOOCV?**

 - low variance
 - high variance
 - faster run time compared to K-fold cross validation
 - slower run time compared to K-fold cross validation

☐ a
☐ b
☐ c
☐ d

No, the answer is incorrect.
Score: 0
Accepted Answers: b
d
- Can you represent the following boolean function with a single logistic threshold unit(i.e., a single unit from a neural network)?**

A	B	f(A,B)
1	1	0
0	0	0
1	0	1
0	1	0

 - Yes
 - No

☐ a
☐ b

No, the answer is incorrect.
Score: 0
Accepted Answers: a
- State whether the statements are True or False.**

Statement A: When the hypothesis space is richer, overfitting is more likely.

Statement B: When the feature space is larger, overfitting is more likely.

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 - False, False
 - True, False
 - True, True
 - False, True

☐ a
☐ b
☐ c
☐ d

No, the answer is incorrect.
Score: 0
Accepted Answers: c
- What is the purpose of restricting hypothesis space in machine learning?**

 - Can be easier to search
 - May avoid overfit since they are usually simpler (e.g. linear or low order decision surface)
 - Both of the above
 - None of the above

☐ a
☐ b
☐ c
☐ d

No, the answer is incorrect.
Score: 0
Accepted Answers: c