Google Discussions

EXAM PROFESSIONAL DATA ENGINEER TOPIC 1 QUESTION 7 DISCUSSION

Actual exam question from Google's Professional Data Engineer
Question #: 7
Topic #: 1
[All Professional Data Engineer Questions]

You are creating a model to predict housing prices. Due to budget constraints, you must run it on a single resource-constrained virtual machine. Which learning algorithm should you use?

A. Linear regression

B. Logistic classification

C. Recurrent neural network

D. Feedforward neural network

Show Suggested Answer

by [deleted] at *March 15, 2020, 8:43 a.m.*

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Radhika7983 Highly Voted 4 years, 6 months ago

Correct answer is A. A tip here to decide when a liner regression should be used or logistics regression needs to be used. If you are forecasting that is the values in the column that you are predicting is numeric, it is always liner regression. If you are classifying, that is buy or no buy, yes or no, you will be using logistics regression.

upvoted 58 times

Anirkent 4 years, 4 months ago

Liner Regression is correct but this is one aspect of the question, how does it relates to resource constrained machines? or that could be just a distraction?

upvoted 7 times

muzammilnxs 4 years, 3 months ago

Neural Networks(Feed Forward or Recurrent) require resource intensive machines(i.e GPU's) whereas Linear regression can be done on ordinary CPU's

upvoted 25 times

[Removed] Highly Voted 5 years, 1 month ago

Correct A

upvoted 8 times

willyunger Most Recent 1 month, 2 weeks ago

Selected Answer: A

linear regression to predict numeric with least cost. for classifying with options use logistics.

upvoted 1 times

SamuelTsch 6 months, 2 weeks ago

Selected Answer: A

the keyword here is running it on a single resource-constrained virtual machine. linear regression is a simple and efficient algorithm that is well-suited for predicting continuous values.

upvoted 2 times

rtcpost 7 months, 1 week ago

Selected Answer: A

Linear regression is a simple and resource-efficient algorithm for predicting continuous values like housing prices. It's computationally lightweight and well-suited for single machines with limited resources. It doesn't require the extensive computational power or specialized hardware that more complex algorithms like neural networks (options C and D) might need.

Option B (Logistic classification) is used for binary classification tasks, not for predicting continuous values like housing prices, so it's not the right choice in this context.

upvoted 3 times

AshishDhamu 1 year, 2 months ago

Selected Answer: A

Linear regression is used for continous distribution.

upvoted 1 times

Fazan456 1 year, 3 months ago

Selected Answer: A

Here, due to budget constraints, we're utilizing a single resource-constrained virtual machine, operating in a minimal resource environment. Linear regression emerges as the appropriate algorithm. It's a lightweight predictive model that suits our resource limitations

upvoted 1 times

RT_G 1 year, 5 months ago

Selected Answer: A

Linear regression will be used since the prediction requires forecasting prices involving numeric values and is computationally less resource intensive

upvoted 1 times

rocky48 1 year, 6 months ago

Selected Answer: A

Correct answer is A

upvoted 1 times

AmmarFasih 1 year, 11 months ago

Selected Answer: A

Correct Answer is A. Since linear regression is used to predict a numeric value. While logistic regression is used to classify among the binary scenario.
Further option C and D are advance ML options and not cost and resource effective for the current situation.

upvoted 1 times

Zosby 2 years, 2 months ago

Zosby 2 years, 2 months ago

predict housing prices = linear regresssion

upvoted 2 times

JJJJim 2 years, 2 months ago

Selected Answer: A

must be A.
Though C can do it, linear regression is the better practice.

upvoted 1 times

lukas_xls 2 years, 4 months ago

Selected Answer: A

Must be A

upvoted 1 times

rowan_ 2 years, 8 months ago

A for sure. B is for classification. Neural nets can accomplish the task but they take WAY too many resources

upvoted 2 times

samdhimal 3 years, 3 months ago

correct answer -> Linear Regression

Linear regression is a statistical method that allows to summarize and study relationships between two continuous (quantitative) variables: One variable, denoted X, is regarded as the independent variable. The other variable denoted y is regarded as the dependent variable. Linear regression uses one independent variable X to explain or predict the outcome of the dependent variable y.

Whenever you are told to predict some future value of a process which is currently running, you can go with a regression algorithm.

upvoted 4 times

samdhimal 2 years, 3 months ago

Linear regression is a simple and computationally efficient algorithm that can be used to predict a continuous target variable based on one or more input variables. It is particularly well-suited for resource-constrained environments, as it requires minimal computational resources and can be run on a single virtual machine.
Linear regression is a good fit for this problem as it is a supervised learning algorithm that can be used for regression problems, and it's not computationally expensive.

Option B is not recommended as Logistic classification is a supervised learning algorithm that is used for classification problems, not regression problems.

Option C and D are not recommended as Recurrent Neural Network (RNN) and Feedforward Neural Network (FNN) are computationally expensive and may require significant computational resources and memory to run on a single virtual machine.

upvoted 2 times

MaxNRG 3 years, 5 months ago

A as Supervised learning using Regression can help build a model to predict house prices.
Option B is wrong as Classification would not help to solve the problem.
Options C & D are wrong as they would need more resources.

upvoted 3 times

anji007 3 years, 6 months ago

Ans: A

upvoted 1 times

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