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### Exam Professional Machine Learning Engineer All Questions

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## EXAM PROFESSIONAL MACHINE LEARNING ENGINEER TOPIC 1 QUESTION 78 DISCUSSIO..

Actual exam question from Google's Professional Machine Learning Engineer

Question #: 78

Topic #: 1

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You are creating a deep neural network classification model using a dataset with categorical input values. Certain columns have a cardinality greater than 10,000 unique values. How should you encode these categorical values as input into the model?

- A. Convert each categorical value into an integer value.
- B. Convert the categorical string data to one-hot hash buckets.
- C. Map the categorical variables into a vector of boolean values.
- D. Convert each categorical value into a run-length encoded string.

Show Suggested Answer

by [LearnSodas](#) at Dec. 11, 2022, 5 p.m.

### Comments

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[PhilipKoku](#) 5 months ago

Selected Answer: B

B) Hash buckets


   upvoted 1 times

  **etienne0** 8 months, 1 week ago

**Selected Answer: A**

went with A

   upvoted 1 times

  **M25** 1 year, 6 months ago

**Selected Answer: B**

Went with B

   upvoted 2 times

  **CloudKida** 1 year, 6 months ago

**Selected Answer: B**

<https://cloud.google.com/ai-platform/training/docs/algorithms/wide-and-deep>

If the column is categorical with high cardinality, then the column is treated with hashing, where the number of hash buckets equals to the square root of the number of unique values in the column.

   upvoted 4 times

  **JamesDoe** 1 year, 7 months ago

**Selected Answer: B**

B.

The other options solves nada.

   upvoted 1 times

  **enghabeth** 1 year, 9 months ago

**Selected Answer: B**

<https://towardsdatascience.com/getting-deeper-into-categorical-encodings-for-machine-learning-2312acd347c8>

When you have millions uniques values try to do: Hash Encoding

   upvoted 1 times

  **John\_Pongthorn** 1 year, 9 months ago

**Selected Answer: B**

B unconditoinally

<https://cloud.google.com/ai-platform/training/docs/algorithms/xgboost#analysis>

If the column is categorical with high cardinality, then the column is treated with hashing, where the number of hash buckets equals to the square root of the number of unique values in the column.

A categorical column is considered to have high cardinality if the number of unique values is greater than the square root of the number of rows in the dataset.



   upvoted 2 times

  **MithunDesai** 1 year, 10 months ago

**Selected Answer: C**

I think C as it has 10000 categorical values

   upvoted 2 times

  **hiromi** 1 year, 10 months ago

**Selected Answer: B**

I think B is correct

Ref.:"

- <https://cloud.google.com/ai-platform/training/docs/algorithms/xgboost>

- <https://stackoverflow.com/questions/26473233/in-preprocessing-data-with-high-cardinality-do-you-hash-first-or-one-hot-encode>

   upvoted 4 times

  **hiromi** 1 year, 10 months ago

- <https://cloud.google.com/ai-platform/training/docs/algorithms/xgboost#analysis>



   upvoted 1 times

  **mil\_spyro** 1 year, 10 months ago

**Selected Answer: B**



Answer is B. When cardinality of the categorical column is very large best choice is binary encoding however it not here hence one-hot hash option.

   upvoted 1 times

  **mil\_spyro** 1 year, 10 months ago

<https://www.analyticsvidhya.com/blog/2020/08/types-of-categorical-data-encoding/>



   upvoted 1 times

  **JeanEl** 1 year, 10 months ago

**Selected Answer: B**

Ans : B



   upvoted 1 times

  **seifou** 1 year, 10 months ago

**Selected Answer: B**

B is correct

   upvoted 1 times

  **ares81** 1 year, 10 months ago

It should be B

   upvoted 1 times

  **LearnSodas** 1 year, 10 months ago

**Selected Answer: A**

Answer A since with 10.000 unique values one-hot shouldn't be a good solution

<https://machinelearningmastery.com/how-to-prepare-categorical-data-for-deep-learning-in-python/>

   upvoted 3 times

  **etienne0** 8 months, 1 week ago

I agree with A

   upvoted 1 times

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