EXAM PROFESSIONAL MACHINE LEARNING ENGINEER TOPIC 1 QUESTION 121 DISCUSSI...

Actual exam question from Google's Professional Machine Learning Engineer
Question #: 121
Topic #: 1
[All Professional Machine Learning Engineer Questions]

You work for a company that is developing a new video streaming platform. You have been asked to create a recommendation system that will suggest the next video for a user to watch. After a review by an AI Ethics team, you are approved to start development. Each video asset in your company's catalog has useful metadata (e.g., content type, release date, country), but you do not have any historical user event data. How should you build the recommendation system for the first version of the product?

A. Launch the product without machine learning. Present videos to users alphabetically, and start collecting user event data so you can develop a recommender model in the future.

B. Launch the product without machine learning. Use simple heuristics based on content metadata to recommend similar videos to users, and start collecting user event data so you can develop a recommender model in the future.

C. Launch the product with machine learning. Use a publicly available dataset such as MovieLens to train a model using the Recommendations AI, and then apply this trained model to your data.

D. Launch the product with machine learning. Generate embeddings for each video by training an autoencoder on the content metadata using TensorFlow. Cluster content based on the similarity of these embeddings, and then recommend videos from the same cluster.

Show Suggested Answer

by mymy9418 at *Dec. 18, 2022, 3:05 a.m.*

Comments

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LFavero 8 months, 1 week ago

Selected Answer: B

D is overkill

upvoted 1 times

guilhermebutzke 9 months, 1 week ago

Selected Answer: B

My choice is B. This is because both B and D have the same goal (recommendation based on content), but option B is simpler for this initial context.

upvoted 2 times

tavva_prudhvi 1 year, 3 months ago

Selected Answer: B

This is because you do not have any historical user event data, so you cannot use a collaborative filtering approach to build a recommender system. However, you can still use simple heuristics based on content metadata to recommend similar videos to users. For example, you could recommend videos that are in the same genre, have the same release date, or are from the same country.
You should also start collecting user event data as soon as possible. This data will be valuable for training a recommender model in the future.

Option D is a more complex approach that would require you to have more expertise in machine learning.(FOR THE FIRST VERSION OF THE PRODUCT)

upvoted 3 times

Voyager2 1 year, 5 months ago

Selected Answer: B

B:
https://developers.google.com/machine-learning/guides/rules-of-ml

upvoted 3 times

aw_49 1 year, 5 months ago

Selected Answer: B

B since we can't use othe encoded data to test on some other system

upvoted 1 times

M25 1 year, 6 months ago

Selected Answer: D

Went with D

upvoted 1 times

Sas02 1 year, 6 months ago

Selected Answer: D

https://cloud.google.com/blog/topics/developers-practitioners/meet-ais-multitool-vector-embeddings
Option D is about creating clusters based on the content metadata and using that to provide recos to users

upvoted 1 times

Yajnas_arpohc 1 year, 7 months ago

Key is the mention “first version of product”

upvoted 1 times

guilhermebutzke 1 year, 7 months ago

Selected Answer: D

It is possible to create a recommendation system just using metadata information, like in:

https://developers.google.com/machine-learning/crash-course/embeddings/categorical-input-data

One of the initial problems of recommender systems is precisely the lack of data for collaborative recommendation. However, this does not prevent other recommendation algorithms, for example, those that use content suggestion.

upvoted 2 times

guilhermebutzke 9 months, 1 week ago

Change my mind: My choice is B. This is because both B and D have the same goal (recommendation based on content), but option B is simpler for this initial context.

upvoted 1 times

TNT87 1 year, 8 months ago

Selected Answer: B

Since you do not have any historical user event data, options C and D are not suitable. In this scenario, it is better to start with a simpler approach, so options A and B are the most suitable. However, option B is preferred because it uses some logic based on content metadata to provide recommendations, which may be more personalized and relevant than presenting videos in alphabetical order. Additionally, collecting user event data from the beginning will help improve the recommendation system in the future.

upvoted 2 times

enghabeth 1 year, 8 months ago

Selected Answer: B

ans B, you need something easier to implement

upvoted 1 times

jamesking1103 1 year, 10 months ago

Selected Answer: D

https://developers.google.com/machine-learning/crash-course/embeddings/categorical-input-data

upvoted 4 times

hiromi 1 year, 10 months ago

Selected Answer: B

B
- https://developers.google.com/machine-learning/guides/rules-of-ml

upvoted 3 times

mymy9418 1 year, 10 months ago

Selected Answer: B

because no user event data, the pretrain model won't help

upvoted 2 times