EXAM PROFESSIONAL MACHINE LEARNING ENGINEER TOPIC 1 QUESTION 6 DISCUSSION

Actual exam question from Google's Professional Machine Learning Engineer
Question #: 6
Topic #: 1
[All Professional Machine Learning Engineer Questions]

You work for an online retail company that is creating a visual search engine. You have set up an end-to-end ML pipeline on Google Cloud to classify whether an image contains your company's product. Expecting the release of new products in the near future, you configured a retraining functionality in the pipeline so that new data can be fed into your ML models. You also want to use AI Platform's continuous evaluation service to ensure that the models have high accuracy on your test dataset. What should you do?

A. Keep the original test dataset unchanged even if newer products are incorporated into retraining.

B. Extend your test dataset with images of the newer products when they are introduced to retraining.

C. Replace your test dataset with images of the newer products when they are introduced to retraining.

D. Update your test dataset with images of the newer products when your evaluation metrics drop below a pre-decided threshold.

Show Suggested Answer

by gcp2021go at *June 5, 2021, 5:39 p.m.*

Comments

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esuaaaa Highly Voted 3 years, 4 months ago

I think B is the right answer.

A: Doesn't make sense. If you don't use the new product, it becomes useless.
C: Conventional products are also necessary as data.
D: I don't understand the need to wait until the threshold is exceeded.

upvoted 32 times

- **mousseUwU** 3 years ago
  Agree with you, B is correct
  upvoted 1 times
- **q4exam** 3 years, 1 month ago
  Agree, B as it extends to new products.
  upvoted 1 times
- **VincenzoP84** 1 year, 5 months ago
  D could have sense considering that is mentioned the intention to use AI Platform's continuous evaluation service
  upvoted 2 times
- **maukaba** 11 months, 1 week ago
  it's D for two reasons:
  - explicitly required in the question to leverage Continuous evaluation service
  - the threshod check allows to decide when perform the retrain avoiding making it for every single new data arrived.
  upvoted 2 times

gcp2021go Highly Voted 3 years, 4 months ago

answer is B

upvoted 11 times

503b759 Most Recent 1 week, 2 days ago

D:
Its definitely not a clear choice. B is the most obvious answer - you know you've got new data coming in, so why not incorporate it immediately into training. EXCEPT the question clearly states that Vertex continual evaluation should feature.

upvoted 1 times

MisterHairy 3 weeks, 6 days ago

=New Question6=
You work for a global footwear retailer and need to predict when an item will be out of stock based on historical inventory dat a. Customer behavior is highly dynamic since footwear demand is influenced by many different factors. You want to serve models that are trained on all available data, but track your performance on specific subsets of data before pushing to production. What is the most streamlined and reliable way to perform this validation?

A. Use the TFX Mode!Validator tools to specify performance metrics for production readiness
B. Use k-fold cross-validation as a validation strategy to ensure that your model is ready for production.
C. Use the last relevant week of data as a validation set to ensure that your model is performing accurately on current data.
D. Use the entire dataset and treat the area under the receiver operating characteristics curve (AUC ROC) as the main metric.

upvoted 4 times

- **oddsoul** 1 month, 1 week ago
  Option A
  You can define specific performance metrics for different subsets of your data
  upvoted 1 times
- **VJlaxmi** 4 months, 3 weeks ago
  option A is correct
  upvoted 1 times
  - **VJlaxmi** 4 months, 3 weeks ago
    TFX ModelValidator tools are designed to integrate performance tracking into the ML pipeline, providing robust validation on specific subsets of data before deploying models to production.
    upvoted 1 times
- **wences** 2 years, 8 months ago
  A is the correct
  upvoted 6 times

sid515 2 years, 9 months ago

B looks to be ok as using cross validation testing results are more even

upvoted 2 times

Load full discussion...

harithacML 3 weeks, 6 days ago

Selected Answer: B

A. Keep the original test dataset unchanged even if newer products are incorporated into retraining. : This would not test on new products.
B. Extend your test dataset with images of the newer products when they are introduced to retraining. Most Voted : old+new products testing. Great
C. Replace your test dataset with images of the newer products when they are introduced to retraining. : No need of old product to be tested? old product recognition might change when new products are added in training. Option Not good.
D. Update your test dataset with images of the newer products when your evaluation metrics drop below a pre-decided threshold.: why wait? no need

upvoted 1 times

EFIGO 3 weeks, 6 days ago

Selected Answer: B

You need to correctly classify newer products, so you need the new training data ==> A is wrong;
You need to keep doing a good job on older dataset, you can't just ignore it ==> C is wrong;
You know when you are introducing new products, there is no need to wait for a drop in preformaces ==> D is wrong;
B is correct

upvoted 2 times

oddsoul 1 month, 1 week ago

Selected Answer: B

B correct

upvoted 1 times

PhilipKoku 4 months, 2 weeks ago

Selected Answer: B

The best approach is option B: Extend your test dataset with images of the newer products. This ensures accurate evaluation as your product catalog evolves.

upvoted 1 times

guilhermebutzke 9 months ago

Selected Answer: B

My initial confusion with option B arose from the phrase "with images of the newer products when they are introduced to retraining." Initially, I mistakenly interpreted it as recommending the use of the same images in both training and testing, which is incorrect. However, upon further reflection, I realized that using the same product does not necessarily mean using identical images. Therefore, I now believe that option B is the most suitable choice.

upvoted 1 times

bugger123 10 months, 3 weeks ago

Selected Answer: B

A and C make no sense - you don't want to lose any of the performance on existing products.
D - Why would you wait for your performance to drop in the first place? That's a reactive rather than proactive approach.
The answer is B

upvoted 1 times

fragkris 10 months, 3 weeks ago

Selected Answer: B

B for sure

upvoted 1 times

Sum_Sum 11 months, 1 week ago

B is the only thing we do in practice

upvoted 1 times

M25 1 year, 5 months ago

Selected Answer: B

Went with B

upvoted 2 times

will7722 1 year, 7 months ago

Selected Answer: B

you can't just replace the old product data with just new product, until you don't sell old product anymore

upvoted 2 times

SharathSH 1 year, 9 months ago

Ans: B
A would not use the newer data hence not a ideal option
C Replacing will not be a good option as it will replace older data with newer data which in turn hampers accuracy
D waiting for threshold is not a better option

upvoted 1 times

koakande 1 year, 10 months ago

B is the most plausible answer. The key principle is that test set should represent ground truth distribution to infer credible model evaluation. So once new products become available, test set should be updated to reflect the new product distribution

upvoted 2 times

abhi0706 1 year, 11 months ago

it should be B as its inclusive

upvoted 1 times

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