

EXAMTOPICS

- Expert Verified, Online, Free.

≡ MENU



🔍 Google Discussions



Exam Professional Machine Learning Engineer All Questions

View all questions & answers for the Professional Machine Learning Engineer exam

Go to Exam

EXAM PROFESSIONAL MACHINE LEARNING ENGINEER TOPIC 1 QUESTION 25 DISCUSSIO..

Actual exam question from Google's Professional Machine Learning Engineer

Question #: 25

Topic #: 1

[\[All Professional Machine Learning Engineer Questions\]](#)

You work for a social media company. You need to detect whether posted images contain cars. Each training example is a member of exactly one class. You have trained an object detection neural network and deployed the model version to AI Platform Prediction for evaluation. Before deployment, you created an evaluation job and attached it to the AI Platform Prediction model version. You notice that the precision is lower than your business requirements allow. How should you adjust the model's final layer softmax threshold to increase precision?

- A. Increase the recall.
- B. Decrease the recall.
- C. Increase the number of false positives.
- D. Decrease the number of false negatives.

Show Suggested Answer

by [deleted] at June 2, 2021, 10:57 p.m.

Comments

Type your comment...

Submit

Paul_Dirac Highly Voted 3 years, 4 months ago

Decreasing FN increases recall (D). So D and A are the same.
Increasing FP decreases precision (C).

Answer: B ("improving precision typically reduces recall and vice versa", <https://developers.google.com/machine-learning/crash-course/classification/precision-and-recall>)

upvoted 30 times

Swagluke 3 years, 2 months ago

I do believe B is the right answer.

But D and A aren't exactly the same.

A. Increase recall can be either

1. keeping TP + FN the same but increase TP and decrease FN. Which isn't sure how that's gonna affect Precision since both TP and TP+FP increase.

2. keeping TP the same but increase (TP + FN), which is increasing FN (Same as D), not sure how that will affect Precision as well.

upvoted 3 times

Danny2021 Highly Voted 3 years, 1 month ago

Precision = TruePositives / (TruePositives + FalsePositives)

Recall = TruePositives / (TruePositives + FalseNegatives)

A. Increase recall -> will decrease precision

B. Decrease recall -> will increase precision

C. Increase the false positives -> will decrease precision

D. Decrease the false negatives -> will increase recall, reduce precision

The correct answer is B.

upvoted 21 times

PhilipKoku Most Recent 5 months ago

Selected Answer: B

B) Decrease Recall (increases precision)

upvoted 1 times

SamuelTsch 1 year, 4 months ago

Selected Answer: B

To increase precision, you have to decrease recall, increase true positives, increase false negatives and decrease false positives

upvoted 2 times

M25 1 year, 6 months ago

Selected Answer: B

Went with B

upvoted 3 times

Fatiy 1 year, 8 months ago

Selected Answer: B

Option B is the best approach because decreasing the threshold will increase the precision by reducing the number of false positives.

upvoted 1 times

John_Pongthorn 1 year, 9 months ago

Selected Answer: B

A, C, D they are the same. So I go with B, it is threshold adjustment from 0.5 +/-

upvoted 1 times

John_Pongthorn 1 year, 9 months ago

WE want to increase Precision, it is the same as decreasing recall. Both are opposed each other.

<https://developers.google.com/machine-learning/crash-course/classification/precision-and-recall>

upvoted 1 times

wish0035 1 year, 10 months ago

ans: B.

A: should decrease even more the precision.

C: will decrease precision

D: will increase recall (precision would be the same)

upvoted 1 times

EFIGO 1 year, 11 months ago



Selected Answer: B

Selected Answer: B

Precision and recall are negatively correlated, when one goes up the other goes down and vice-versa; to increase precision we need to decrease recall, therefore answer B.

(To be more complete, answer C and D are wrong because they both would increase recall, according to the recall formula)



   upvoted 2 times

  **GCP72** 2 years, 2 months ago

Selected Answer: C

Correct answer is "C"

   upvoted 1 times

  **GCP72** 2 years, 2 months ago

sorry correct ans is " B"

   upvoted 1 times

  **originalliang** 2 years, 2 months ago

Answer is D

If the dataset does not change, TP + FN is constant.

FN goes down then TP goes up.

Hence Precision = TP / TP + FP goes up.

   upvoted 2 times

  **Mohamed_Mossad** 2 years, 4 months ago

Selected Answer: B

precision and recall have negative proportion , so to increase precision reduce recall

   upvoted 1 times



  **morgan62** 2 years, 7 months ago

Selected Answer: B

It's B.

C,D is basically ruining your model.

   upvoted 1 times

  **sonxxx** 2 years, 8 months ago

Answer: D

Because of Precision should respond the answer how many retrieved items are relevant? In the relation of False Negative / true positives an optima precision need a high number of true positives. If your model is precision is lower than your business requirement is because the model has a high number of false negatives. Check it in:

https://en.wikipedia.org/wiki/Precision_and_recall

   upvoted 2 times

  **xiaoF** 2 years, 9 months ago

Selected Answer: B

definitely B

   upvoted 1 times



  **Sangy22** 2 years, 9 months ago

I think this should be C. The reason is, for one to increase precision, the classification threshold for whether the car is there or not should be kept low. That way, even when the model is not very confident (say only 60% confident), it will say, yes, car is there. What this does is it will crease the times the model says car is present, driving up precision (when it says car is there, car is really there). The consequence of this is, False positives will increase too, reducing recall.




So C is my choice.

Choices A and B are not really right, as precision and recall are after-effects, not something you will control ahead.

   upvoted 1 times

  **Bemnet** 2 years, 11 months ago

Answer is B . 100% sure . The only way to affect precision and recall is by adjusting threshold. FN and FP go in opposite direction so C & D are the same. A increasing recall decreases precision .

   upvoted 3 times

[Load full discussion...](#)

Start Learning for free



Social Media

[Facebook](#) , [Twitter](#)

[YouTube](#) , [Reddit](#)

[Pinterest](#)



We are the biggest and most updated IT certification exam material website.

Using our own resources, we strive to strengthen the IT professionals community for free.



© 2024 ExamTopics

ExamTopics doesn't offer Real Microsoft Exam Questions. ExamTopics doesn't offer Real Amazon Exam Questions. ExamTopics Materials do not contain actual questions and answers from Cisco's Certification Exams.

CFA Institute does not endorse, promote or warrant the accuracy or quality of ExamTopics. CFA® and Chartered Financial Analyst® are registered trademarks owned by CFA Institute.