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Exam Professional Machine Learning Engineer All Questions
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📄 EXAM PROFESSIONAL MACHINE LEARNING ENGINEER TOPIC 1 QUESTION 12 DISCUSSIO..

Actual exam question from Google's Professional Machine Learning Engineer
Question #: 12
Topic #: 1

[All Professional Machine Learning Engineer Questions]

You are designing an architecture with a serverless ML system to enrich customer support tickets with informative metadata before they are routed to a support agent. You need a set of models to predict ticket priority, predict ticket resolution time, and perform sentiment analysis to help agents make strategic decisions when they process support requests. Tickets are not expected to have any domain-specific terms or jargon.
The proposed architecture has the following flow:
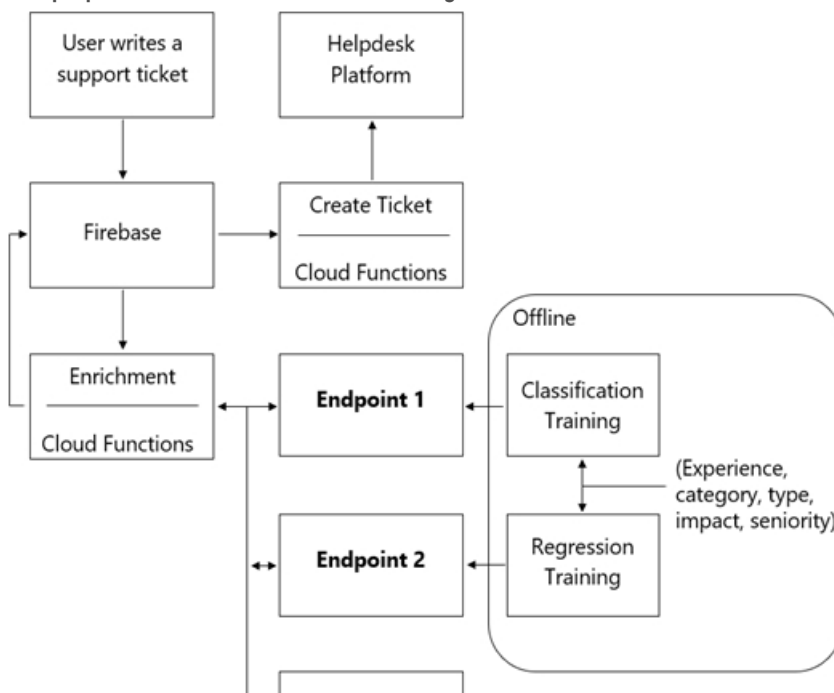
Endpoint 3

Which endpoints should the Enrichment Cloud Functions call?

    A. 1 = AI Platform, 2 = AI Platform, 3 = AutoML Vision

    B. 1 = AI Platform, 2 = AI Platform, 3 = AutoML Natural Language

    C. 1 = AI Platform, 2 = AI Platform, 3 = Cloud Natural Language API

    D. 1 = Cloud Natural Language API, 2 = AI Platform, 3 = Cloud Vision API

[Show Suggested Answer]

by 👤 inder0007 at *June 5, 2021, 8:40 p.m.*

Comments

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👤 **Celia20210714** `Highly Voted 👍` 3 years, 3 months ago

ANS: C

https://cloud.google.com/architecture/architecture-of-a-serverless-ml-model#architecture
The architecture has the following flow:
A user writes a ticket to Firebase, which triggers a Cloud Function.
-The Cloud Function calls 3 different endpoints to enrich the ticket:
-An AI Platform endpoint, where the function can predict the priority.
-An AI Platform endpoint, where the function can predict the resolution time.
-The Natural Language API to do sentiment analysis and word salience.
-For each reply, the Cloud Function updates the Firebase real-time database.
-The Cloud Function then creates a ticket into the helpdesk platform using the RESTful API.

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👤 **gcp2021go** `Highly Voted 👍` 3 years, 4 months ago

the answer should be C. The tickets do not include specific terms , which means, it doesn't need to be custom built. thus, we can use cloud NLP API instead of automl NLP.

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👤 **wishyrater** `Most Recent ⊘` 4 weeks ago

`Selected Answer: C`

ANS: C
Tickets are not expected to have any domain-specific terms or jargon. Therefore we can use the Natural Language API, and we don't need to train our own model.

👍 ↩ 🚩 upvoted 1 times

👤 **PhilipKoku** 4 months, 2 weeks ago

`Selected Answer: C`

C) Eliminate A and D as not vision or images required. From B (Auto ML Natural Language) requires custom training and C) NLP API gives you sentiment analysis out of the box.

👍 ↩ 🚩 upvoted 2 times

👤 **Sum_Sum** 11 months, 1 week ago

`Selected Answer: C`

C - as Natural Language API has sentiment analysis
and using the API over a custom model is always preferred

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👤 **harithacML** 1 year, 3 months ago

`Selected Answer: C`

Req : serverless ML system + models to (predict ticket priority -predict ticket resolution time- perform sentiment analysis)

The proposed architecture has the following flow:

A. 1 = AI Platform, 2 = AI Platform, 3 = AutoML Vision. : No image data as input here. Only text (NLP)
B. 1 = AI Platform, 2 = AI Platform, 3 = AutoML Natural Language : Only sentiment for 3rd endpoint. No custom model needed : https://cloud.google.com/natural-language/automl/docs/beginners-guide . So autoML not required
C. 1 = AI Platform, 2 = AI Platform, 3 = Cloud Natural Language API : 1- for classification(priority :high low medium), 2- ticket time-regression -3- sentiment analysis the CNL api is enough
D. 1 = Cloud Natural Language API, 2 = AI Platform, 3 = Cloud Vision API : No image data

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👤 **M25** 1 year, 5 months ago

Selected Answer: C

Went with C

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👤 **wish0035** 1 year, 10 months ago

Selected Answer: C

ANS: C

This is the exact solution by Google:
https://web.archive.org/web/20210618072649/https://cloud.google.com/architecture/architecture-of-a-serverless-ml-model#architecture

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👤 **jespinosal** 1 year, 10 months ago

Selected Answer: B

ANS: B As you need to train custom regression models (Auto ML), as NLP API is not going to be able to rank your Priority and eval the Time.

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👤 **jespinosal** 1 year, 10 months ago

ANS: C as NLP API is not able to perform custom Regression Models (predict time) and Priority. You need Auto ML o train your own

👍 ↩ 🚩 upvoted 1 times

👤 **EFIGO** 1 year, 11 months ago

Selected Answer: C

AI Platform (now Vertex AI) for both the predictions and Natural Language API for sentiment analysis since there are no specific terms (so no need to custom build something with an AutoML), so C

👍 ↩ 🚩 upvoted 2 times

👤 **GCP72** 2 years, 2 months ago

Selected Answer: C

Correct answer is "C"

👍 ↩ 🚩 upvoted 1 times

👤 **Mohamed_Mossad** 2 years, 4 months ago

Selected Answer: C

- by options eliminations A,D must be dropped we have no vision tasks in this system
- answer between B,C , question stated "no specific domain or jargon" so natural laguage api is prefered over automl since there no custom entinites or custom training , so I vote for C

👍 ↩ 🚩 upvoted 2 times

👤 **caohieu04** 2 years, 7 months ago

Selected Answer: C

Community vote

👍 ↩ 🚩 upvoted 4 times

👤 **alphard** 2 years, 10 months ago

Mine is C.

Priority prediction is categorical. Resolution time is linear regression. Sentiment is a NLP problem.

👍 ↩ 🚩 upvoted 2 times

👤 **chohan** 3 years, 4 months ago

Should be B, don't forget the domain specific terms and jargons
https://medium.com/google-cloud/analyzing-sentiment-of-text-with-domain-specific-vocabulary-and-topics-726b8f287aef

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👤 **gcp2021go** 3 years, 3 months ago

gcp2021go 3 years, 3 months ago

the question said "Tickets are not expected to have any domain-specific terms or jargon."

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inder0007 3 years, 4 months ago

not sure if I agree with b, I think D is a better choice

👍 ↩ ⚑ upvoted 1 times

Hiba01 3 years, 4 months ago

predict ticket priority (AI plateform : classification), predict ticket resolution time (AI plateform : regression), and perform sentiment analysis (Cloud NLP API)

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sensev 3 years, 2 months ago

D is wrong since Cloud Vision API is not needed.

👍 ↩ ⚑ upvoted 2 times

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