



- 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 265 DISCUSSI...

Actual exam question from Google's Professional Machine Learning Engineer

Question #: 265

Topic #: 1

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

You work for a company that is developing an application to help users with meal planning. You want to use machine learning to scan a corpus of recipes and extract each ingredient (e.g., carrot, rice, pasta) and each kitchen cookware (e.g., bowl, pot, spoon) mentioned. Each recipe is saved in an unstructured text file. What should you do?

- A. Create a text dataset on Vertex AI for entity extraction. Create two entities called "ingredient" and "cookware", and label at least 200 examples of each entity. Train an AutoML entity extraction model to extract occurrences of these entity types. Evaluate performance on a holdout dataset.
- B. Create a multi-label text classification dataset on Vertex AI. Create a test dataset, and label each recipe that corresponds to its ingredients and cookware. Train a multi-class classification model. Evaluate the model's performance on a holdout dataset.
- C. Use the Entity Analysis method of the Natural Language API to extract the ingredients and cookware from each recipe. Evaluate the model's performance on a prelabeled dataset.
- D. Create a text dataset on Vertex AI for entity extraction. Create as many entities as there are different ingredients and cookware. Train an AutoML entity extraction model to extract those entities. Evaluate the model's performance on a holdout dataset.

Show Suggested Answer

by [pikachu007](#) at Jan. 13, 2024, 4:08 p.m.

Comments

Type your comment...

Submit

  **AzureDP900** 3 months, 2 weeks ago

By choosing option A, you can leverage the power of machine learning to efficiently extract ingredients and cookware from recipes in a scalable manner.

option C uses the Entity Analysis method of the Natural Language API, which might be a viable option if you had access to the API's pre-trained models. However, since you're working with Vertex AI, creating a dataset for entity extraction is a better choice.

   upvoted 1 times

  **fitri001** 6 months, 1 week ago

Selected Answer: A

For extracting ingredients and cookware from recipe text files, creating a text dataset on Vertex AI for entity extraction with a custom NER model is the better approach. While it requires more upfront effort for data labeling and training, it offers superior accuracy and control over the types of entities extracted.

However, if you need a quick and easy solution to get started, the Natural Language API's Entity Analysis can be a temporary option. Be aware that the accuracy might be lower, and you might need to post-process the results to filter out irrelevant entities.

   upvoted 1 times

  **omermahgoub** 6 months, 1 week ago

Selected Answer: C

Natural Language API offers a pre-built solution for entity analysis which eliminates the need for custom model training and labeling large datasets, saving time and resources.

Vertex AI AutoML can also be used for entity extraction but it requires data labeling and training, which can be time-consuming for a vast number of potential ingredients and cookware.

   upvoted 1 times

  **guilhermebutzke** 8 months, 1 week ago

Selected Answer: A

My Answer: A



A: is the most suitable approach for this task because we need to identify and extract specific named entities ("ingredient" and "cookware") from the text, not classify the entire recipe into predefined categories.

B: This approach would require classifying each recipe based on all possible ingredients and cookware, leading to a vast number of classes and potential performance issues.

C: This pre-built solution might not be as customizable or scalable as training a specific model for this task.

D: This is impractical and unnecessary as the number of potential ingredients and cookware is vast.

   upvoted 2 times

  **daidai75** 9 months ago

I prefer to A.

Option C is not the best, because The NLP API is designed to identify general entities within text. While it's effective for broad categories, it may not be as precise for specialized domains like cooking ingredients and cookware, which require a more tailored approach.

   upvoted 1 times

  **b1a8fae** 9 months ago

Selected Answer: A

A.

"... you might create an entity extraction model to identify specialized terminology in legal documents or patents."

I prefer this over C, which might classify carrot as vegetable, chicken as meat... custom entity extraction allows you to specify what entities you wish to extract from the text.

   upvoted 3 times

  **b1a8fae** 9 months ago

<https://cloud.google.com/vertex-ai/docs/text-data/entity-extraction/prepare-data>

   upvoted 3 times

  **shadz10** 9 months, 1 week ago

Selected Answer: C

Reconsidering my answer and going with C

Option A involves using AutoML entity extraction, which could be a valid approach. However, for extracting entities like ingredients and cookware, Google Cloud's pre-trained Natural Language API might be a more straightforward solution.

   upvoted 1 times

  **tavva_prudhvi** 8 months, 1 week ago

No, A is right as it may not be as effective for this specific task unless the ingredients and cookware are already well-represented within the types of entities the API is trained to recognize. This approach might require less initial setup but could be less accurate for specialized domains like recipes.


   upvoted 1 times

  **shadz10** 9 months, 1 week ago

Selected Answer: A

A is the correct option here

   upvoted 1 times

  **pikachu007** 9 months, 1 week ago



Selected Answer: C

Option B: Multi-label text classification is less suitable for identifying specific entities within text and would require labeling entire recipes with multiple classes, increasing complexity and reducing model specificity.

Option C: Natural Language API's Entity Analysis might not be as accurate for this specialized domain as a model trained on custom recipe data.

Option D: Creating separate entities for each ingredient and cookware type would significantly increase labeling effort and potentially hinder model generalization.

   upvoted 1 times

  **kalle_balle** 9 months, 1 week ago

do you mean Option A?

   upvoted 2 times

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.