Information

Description

We are researchers at the University of Chicago doing a study to evaluate a testing tool for software that uses machine learning (ML) APIs. Here, ML APIs refer to cloud services that encapsulate machine learning solutions into web API calls.

In this study, you will be asked to implement two simple Python functions with ML API and use our tool to test it. Then you will be asked to go through the testing report and making coding decisions. You need to have experience with Python development. Machine learning background is **not** needed.

The study includes a 10-minute survey phase and a 75-minute interview phase:
1. Survey phase: You will be given tutorials on basics of ML APIs from Google Cloud AI. Then you will be asked a few questions to check the understanding of tutorial.
2. Interview phase: After finishing the survey, you will be invited to another prolific study for the interview. You will be asked to implement Python functions and use our testing tool. The interview will happen on Zoom.

3. Additional interview: If you could not finish all tasks during the first interview, we provide opportunities for additional 60-minute interviews.

Compensation

You will be compensated $2 for the survey and $20 for the initial 75-minute interview. If you are unable to finish all the tasks during the initial interview, we may schedule additional 60-minute interviews with a compensation of $10 for each.

Confidentiality

We will not collect any personally identifying information during the study. Your Mechanical Turk Worker ID/Prolific Academic ID will be used to distribute payment to you but will not be stored with the research data we collect from you.

There is a phase in the interview that requires screen sharing. Before that, we will remind you not to show sensitive information on the screen over the course of the study. Please do not disclose any sensitive information during the interview.

Participation is voluntary. Refusal to participate or withdrawing from the research will involve no penalty or loss of benefits to which you might otherwise be entitled. You may stop participating at any time.

Before you proceed please read the consent form (you do not have to fill it out). If all of your questions have been answered, and you would like to participate in this study, click the consent buttons below. Remember, your participation is completely voluntary, and you're free to withdraw from the study at any time.

	Yes
I am at least 18 years old	☐
I have read and understood the consent form	☐
I agree to participate in this online study	☐
I am able to write Python code	☐

What is your prolific ID?

This study requires participating in a 75-minute interview in the next week (audio, screen-sharing, but no camera). You need to download Zoom App on your PC, where we

conduct the interview.

Your participation for this survey will only be approved if an interview in the next weeks is scheduled. Please indicate below whether you would like to participate in the interview.

- ○ Yes
- ○ No

Please use the following Calendly link to schedule your time slot for the interview:
Click here

You will be compensate **ONLY** after we received your reservation.
Your reserved time slot will only be confirmed if you reply to our confirmation message on Prolific (it will be sent within 6 hours).

Note: Please also make sure to fill in your Prolific ID (a long string containing both characters and digits) so that we can compensate you for this study and invite you to another study for the interview.
You can use anonyms and your Prolific email in the Calendly link if you are not willing to disclose your personal email. We will send a message about the

meeting details once a time slot has been successfully scheduled.

Have you successfully scheduled a time slot using the Calendly link?

- ○ Yes
- ○ No

What is your scheduled time?

ML API

Introduction

Please read the introduction of Google Cloud AI (Google Cloud Vision and Google Cloud NLP) by clicking here.

You **do not** need to memorize the material. You could always refer to these materials when answering questions. Running the code snippet in the tutorial is not

required. Instead, you only need to have a general concept of:

1. The cognition task that ML API performs
2. The input and output of ML API
3. The Python script to call ML API

Next, we will ask you some questions to check your understanding of ML API that you will be asked to invoke in the interview phase

Imagine that you want to know the topic of an article, which API should you use?

- analyze_entities
- classify_text
- label_detection

Correct! You can use classify_text API from LanguageServiceClient to get the topic of an article. It will return a list of content categories that apply to the text found in the document.

Wrong! The correct ML API should be classify_text from LanguageServiceClient. It will return a list of content categories that apply to the text found in the document.

What is the functionality of label_detection API from ImageAnnotatorClient?

- It performs feature detection on an image and returns a list of descriptions
- It performs feature detection on an image and returns the most related description
- It detects popular natural and human-made structures on an image and returns a list of descriptions
- It detects popular natural and human-made structures on an image and returns the most related description

Correct! label_detection API performs image classification and returns top-10 categories (including category name, category uuid, and confidence).

Wrong! label_detection API performs **image classification** and returns **top-10 categories** (including category name, category uuid, and confidence).

Demographics

Demographics

With what gender do you identify?

- Male
- Female
- Non-binary / third gender
- Prefer not to say

What is your age?

- 18 - 24
- 25 - 34
- 35 - 44
- 45 - 54
- 55 - 64
- 65 - 74
- 75 or older
- Prefer not to say

What is the highest degree or level of school you have completed?

- Less than high school
- High school graduate
- Some college
- 2 year degree
- 4 year degree
- Professional degree
- Doctorate
- Prefer not to say

Are you majoring in, hold a degree in, or have held a job in any of the following fields: computer science, computer engineering, information technology, or a related field?

- Yes
- No
- Prefer not to say

How knowledgeable are you to programming?

- I'm an expert in programming.
- I'm familiar with programming, but not in professional level.
- I can program, but I'm not familiar with it.
- Prefer not to say

How knowledgeable are you to machine learning?

- I'm an expert in machine learning.
- I'm familiar with machine learning, but not in professional level.
- I know machine learning concepts, but I'm not familiar with it.
- I don't have any machine learning background.
- Prefer not to say

Thanks for answering all these questions!

Your submission will be approved if you have scheduled an interview time slot.
Note: Your time slot will only be confirmed if you reply to our confirmation message on Prolific platform. After returning to Prolific from this survey, please visit the Messaging Center. The message will appear within 6 hours.
At the beginning of the interview, we will invite you to the corresponding study.

Meanwhile, please download Zoom app on your personal computer. We will conduct interview through Zoom. You will also access our server to write code with Zoom remote access feature.

Please click next to access the completion link.

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