

Task description

You will help us understand how people learn to **simulate the behavior of NLP models**.

DUPLICATE QUESTION DETECTION

The NLP model in question predicts whether two questions are duplicates of each other - that is, whether they should point to the same answer in a website like Quora.The label are thus (*Non-duplicate / Duplicate*).

THE CONTEXT

In each round, you will see a reference example like below, with the model's prediction on it (below, the model makes a **Correct** prediction).

old q1

 Why is the sky blue ?

old q2

 Why is that the sky is so blue ?

Model predicts

 Duplicate (98.5% confident)

Model correct?

 Correct

Additional Clues about the model's behavior

FEATURE IMPORTANCE

To help you understand what is driving the model's prediction, we keep **Q1** fixed and highlight on **Q2** words that are **important for the model's prediction**, in blue (we also show a bar chart with the five most important words) .

These values are computed by a standard black-box explanation technique (SHAP), which **masks different groups of words in Q2** and summarizes how predictions change as a result.

old q1

 Why is the sky blue ?

old q2

 Why is that the sky is so blue ?

Model predicts

 Duplicate (98.5% confident)

Model correct?

 Correct

sky

so

blue

is

Why

weight

0.00

0.05

0.10

0.15

0.20

ASK THE MODEL QUESTIONS!

You can also **make small changes to Q2** and see the resulting model predictions, in order to get a better understanding of how the model behaves around the reference example. You can ask up to **10** additional questions per round to learn more about the model. For example, you may want to ask the following question:

old q1

 Why is the sky blue ?

New q2

 Why is that the sky is so **dark** ?

Model predicts

 Non-duplicate (99.6% confident)

YOUR TASK

After seeing *the reference example, feature importances, and asking your own questions of the model*, we will ask you to try to **guess how the model would predict several variations of Question 2** (**New Q2**).

Beware that **the model is not perfect, so it may make mistakes** (you should try to simulate the model to the best of your ability). Below is an example of a variation of **q2** we might ask you to label:

old q1

 Why is the sky blue ?

New q2

 Why is that the sky is so **white** ?

Model will predict

☐ Non-duplicate ☒ Duplicate

As you see, the model may be incorrect, so please learn about **the model's behavior** carefully through the **Additional Clue**.

Procedure

You will first go through a **1-round training phrase** to help you get familiar with the task. Then, you will complete **20 rounds** of labelings.