

1. Explore the Hub and look for the roberta-large-mnli checkpoint. What task does it perform?

Summarization

Text classification

**Correct!** More precisely, it classifies if two sentences are logically linked across three labels (contradiction, neutral, entailment) — a task also called *natural language inference*.

Text generation

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2. What will the following code return?

```
from transformers import pipeline

ner = pipeline("ner", grouped_entities=True)
ner("My name is Sylvain and I work at Hugging Face in Brooklyn.")
```

- It will return classification scores for this sentence, with labels "positive" or "negative".
- It will return a generated text completing this sentence.
- It will return the words representing persons, organizations or locations.

**Correct!** Furthermore, with grouped\_entities=True, it will group together the words belonging to the same entity, like "Hugging Face".

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You got all the answers!

#### 3. What should replace ... in this code sample?

```
from transformers import pipeline

filler = pipeline("fill-mask", model="bert-base-cased")
result = filler("...")
```

- This <mask> has been waiting for you.
- This [MASK] has been waiting for you.

**Correct!** Correct! This model's mask token is [MASK].

This man has been waiting for you.

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You got all the answers!

# 4. Why will this code fail?

```
from transformers import pipeline

classifier = pipeline("zero-shot-classification")

result = classifier("This is a course about the Transformers library")
```

✓ This pipeline requires that labels be given to classify this text.

**Correct!** Right — the correct code needs to include candidate\_labels=[...].

- This pipeline requires several sentences, not just one.
- 📗 The 🤗 Transformers library is broken, as usual.
- This pipeline requires longer inputs; this one is too short.

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### 5. What does "transfer learning" mean?

- Transferring the knowledge of a pretrained model to a new model by training it on the same dataset.
- ✓ Transferring the knowledge of a pretrained model to a new model by initializing the second model with the first model's weights.

**Correct!** Correct: when the second model is trained on a new task, it \*transfers\* the knowledge of the first model.

Transferring the knowledge of a pretrained model to a new model by building the second model with the same architecture as the first model.

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You got all the answers!

# 6. True or false? A language model usually does not need labels for its pretraining.

True

**Correct!** The pretraining is usually *self-supervised*, which means the labels are created automatically from the inputs (like predicting the next word or filling in some masked words).

False

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You got all the answers!

7. Select the sentence that best describes the terms "model", "architecture", and "weights".
If a model is a building, its architecture is the blueprint and the weights are the people living inside.
An architecture is a map to build a model and its weights are the cities represented on the map.
An architecture is a succession of mathematical functions to build a model and its weights are those functions parameters.
<b>Correct!</b> The same set of mathematical functions (architecture) can be used to build different models by using different parameters (weights).
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8. Which of these types of models would you use for completing prompts with generated text?
<ul><li>An encoder model</li><li>✓ A decoder model</li></ul>
<b>Correct!</b> Decoder models are perfectly suited for text generation from a prompt.
A sequence-to-sequence model
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9. Which of those types of models would you use for summarizing texts?
An encoder model
A decoder model
✓ A sequence-to-sequence model
<b>Correct!</b> Sequence-to-sequence models are perfectly suited for a summarization task.
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# 10. Which of these types of models would you use for classifying text inputs according to certain labels? An encoder model **Correct!** An encoder model generates a representation of the whole sentence which is perfectly suited for a task like classification. A decoder model A sequence-to-sequence model You got all the answers! Submit 11. What possible source can the bias observed in a model have? The model is a fine-tuned version of a pretrained model and it picked up its bias from it. Correct! When applying Transfer Learning, the bias in the pretrained model used persists in the fine-tuned model. The data the model was trained on is biased. **Correct!** This is the most obvious source of bias, but not the only one. The metric the model was optimizing for is biased. **Correct!** A less obvious source of bias is the way the model is trained. Your model will blindly optimize for whatever metric you chose, without any second thoughts.

Complete Chapter

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← Summary

You got all the answers!