End-of-chapter quiz

This chapter covered a lot of ground! Don't worry if you didn't grasp all the details; the next chapters will help you understand how things work under the hood.

First, though, let's test what you learned in this chapter!

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

- [ ] Summarization
- [x] 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

Submit **You got all the answers!**

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.
- [x] 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".

Submit **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.
- [x] This [MASK] has been waiting for you.

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

- [ ] This man has been waiting for you.

Submit **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")
```

- [x] 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.

Submit **You got all the answers!**

5. What does “transfer learning” mean?

- [ ] Transferring the knowledge of a pretrained model to a new model by training it on the same dataset.
- [x] 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.

Submit **You got all the answers!**

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

- [x] 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).

- [x] False

Submit **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.

- [x] An architecture is a succession of mathematical functions to build a model and its weights are those functions parameters.

Correct! The same set of mathematical functions (architecture) can be used to build different models by using different parameters (weights).

Submit **You got all the answers!**

8. Which of these types of models would you use for completing prompts with generated text?

- [ ] An encoder model
- [x] A decoder model

Correct! Decoder models are perfectly suited for text generation from a prompt.

- [ ] A sequence-to-sequence model

Submit **You got all the answers!**

9. Which of those types of models would you use for summarizing texts?

- [ ] An encoder model
- [ ] A decoder model
- [x] A sequence-to-sequence model

Correct! Sequence-to-sequence models are perfectly suited for a summarization task.

Submit **You got all the answers!**

10. Which of these types of models would you use for classifying text inputs according to certain labels?

- [x] 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

Submit **You got all the answers!**

11. What possible source can the bias observed in a model have?

- [x] 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.

- [x] The data the model was trained on is biased.

Correct! This is the most obvious source of bias, but not the only one.

- [x] 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.

Submit **You got all the answers!**

← Summary

Complete Chapter