- the Generative Pretrained Transformer (GPT)3 and Bidirectional Encoder Represen- tations from Transformers (BERT)
- One area where RNNs played an important role was in the development of machine translation systems, where the objective is to map a sequence of words in one lan- guage to another.
- Although elegant in its simplicity, one weakness of this architecture is that the final hidden state
  of the encoder creates an information bottleneck: it has to represent the meaning of the whole
  input sequence because this is all the decoder has access to when generating the output. This is
  especially challenging for long sequences, where information at the start of the sequence might
  be lost in the process of compressing everything to a single, fixed representation
- quick recap on transfer learning
- The initial training objective is quite simple: predict the next word based on the previous words.
   This task is referred to as language modeling. The elegance of this approach lies in the fact that no labeled data is required
- Uses only the decoder part of the Transformer architecture, and the same language modeling approach as ULMFiT. GPT was pretrained on the BookCorpus,11 which consists of 7,000 unpublished books
- quick recap on hugging face and start to work on real project using transformers from hugging face
- The first time you run this code you'll see a few progress bars appear because the pipeline automatically downloads the model weights from the Hugging Face Hub. The second time you instantiate the pipeline, the library will notice that you've already downloaded the weights and will use the cached version instead. By default, the text-classification pipeline uses a model that's designed for sentiment analy- sis, but it also supports multiclass and multilabel classification.
- we could use it also in entity recognition , question answering , summarization , translation , text generation
- The Hugging Face Hub hosts over 20,000 freely available models ,there are filters for tasks, frameworks, datasets, and more that are designed to help you navigate

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