1. **Why would you want to use the Data API?**

APIs are needed to bring applications together in order to perform a designed function built around sharing data and executing pre-defined processes. They work as the middle man, allowing developers to build new programmatic interactions between the various applications people and businesses use on a daily basis

1. **What are the benefits of splitting a large dataset into multiple files?**

By splitting your dataset, **you can make them more secure**.

1. **During training, how can you tell that your input pipeline is the bottleneck? What can you do to fix it?**

The bottleneck in a neural network is just **a layer with fewer neurons than the layer below or above it**.

1. **Can you save any binary data to a TFRecord file, or only serialized protocol buffers?**

The TFRecord format is a simple format for **storing a sequence of binary records**. Protocol buffers are a cross-platform, cross-language library for efficient serialization of structured data.

1. Why would you go through the hassle of converting all your data to the Example protobuf format? Why not use your own protobuf definition?
2. When using TFRecords, when would you want to activate compression? Why not do it systematically?

The TFRecord format is a simple format for **storing a sequence of binary records**.

1. Data can be preprocessed directly when writing the data files, or within the tf.data pipeline, or in preprocessing layers within your model, or using TF Transform. Can you list a few pros and cons of each option?