1. How would you describe TensorFlow in a short sentence? What are its main features? Can

you name other popular Deep Learning libraries?

Tensor Flow is an open-source end-to-end platform for creating Machine Learning applications. It is a symbolic math library that uses dataflow and differentiable programming to perform various tasks focused on training and inference of deep neural networks. It allows developers to create machine learning applications using various tools, libraries, and community resources.

Currently, the most famous deep learning library in the world is Google’s TensorFlow. Google product uses machine learning in all of its products to improve the search engine, translation, image captioning or recommendations.

2. Is TensorFlow a drop-in replacement for NumPy? What are the main differences between

the two?

Numpy is a computing package for Linear Algebra. TensorFlow is a library for Deep Learning. When you want to write a code in TensorFlow, you deal with vectors, matrices, and basically Linear Algebra. Then you cannot scape using Numpy. Otherwise, there are not correlated except Numpy might be used in the TensorFlow source code.

3. Do you get the same result with tf.range(10) and tf.constant(np.arange(10))?

4. Can you name six other data structures available in TensorFlow, beyond regular tensors?

We will begin by understanding the data structure of tensor. Tensors are used as the basic data structures in TensorFlow language. Tensors represent the connecting edges in any flow diagram called the Data Flow Graph. Tensors are defined as multidimensional array or list.

5. A custom loss function can be defined by writing a function or by subclassing

the keras.losses.Loss class. When would you use each option?

A loss function is one of the two arguments required for compiling a Keras model: All built-in loss functions may also be passed via their string identifier: Loss functions are typically created by instantiating a loss class (e.g. keras.losses.SparseCategoricalCrossentropy ).