MCSE603P – Deep Learning Lab
Slot : L3 + L4

Introduction to TensorFlow

Instructions:

- Documentation should be clear. Copy the question in a text cell, and write the answers in the code cell, execute and obtain the output.
- 10 questions are given below in PART-A.
- Formulate 10 more questions (that should reflect your understanding of TF) and write the questions (PART-B) and try to answer those questions following the above instructions.
- Upload the python notebook (both PART-A and PART-B).

PART-A

1. Create a vector, scalar, matrix and tensor with values of your choice using `tf.constant()`.
2. Find the shape, rank and size of the tensors (which you created for Q1).
3. Create two tensors containing random values between 0 and 1 with shape `[5, 300]`.
4. Multiply the two tensors (which you created for Question 3) using matrix multiplication.
5. Multiply the two tensors (which you created for Question 3) using dot product.
6. Create a tensor with random values between 0 and 1 with shape `[224, 224, 3]`.
7. Find the min and max values of the tensor (which you created for Question 6)
8. Created a tensor with random values of shape `[1, 224, 224, 3]` then squeeze it to change the shape to `[224, 224, 3]`.
9. Create a tensor with shape `[10]` using your own choice of values, then find the index which has the maximum value.
10. One-hot encode the tensor you created in 9

Deadline : 20.12.2024