PDPM
IIITDM
Jabalpur

Winter FDP on Deep Learning & Applications
09-13 Dec. 2019

Introduction to Tensorflow

Tensorflow

- TensorFlow is an end-to-end open source platform for machine learning.
- It has a comprehensive, flexible ecosystem of tools, libraries and community resources that lets researchers push the state-of-the-art in ML and developers easily build and deploy ML powered applications.

Tensorflow

- Import library
  import tensorflow as tf
- Tensorflow array with one at all places
  b=tf.ones((2,2,2))
  b.eval()
- Tensorflow array with particular value at all places
  c=tf.fill((2,2), value=.5)
  c.eval()
- Tensorflow constant
  d= tf.constant(3)
  d.eval()

Tensorflow

- Tensorflow array with random normal values –
  import tensorflow as tf
- Tensorflow array with random values with fixed range –
  f= tf.random_uniform((2, 2), minval=-2, maxval=2)
  f.eval()
- Tensorflow adding two arrays –
  g= tf.ones((2, 2))
  h= tf.ones((2, 2))
  i=g+h
  i.eval()
- Tensorflow multiply fixed value to array –
  j = 2 * i
  j.eval()

Tensorflow

- Tensorflow array multiplication –
  k= tf.fill((2,2), 2.)
  l = tf.fill((2,2), 7.)
  m = k *l
  m.eval()
- Tensorflow identity matrix–
  n = tf.eye(4)
  n.eval()
- Tensorflow diagonal matrix–
  p = tf.diag(o)
  p.eval()

Tensorflow

- Tensorflow array transpose –
  r = tf.matrix_transpose(q)
  r.eval()
- Tensorflow session–
  sess = tf.Session()
  a = tf.ones((3, 3))
  b = tf.matmul(a, a)
  b.eval(session=sess)

THANK YOU

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