

Updating TensorFlow

<https://github.com/uvarc/rivanna-docker>

Repository of the images to use

3 different versions of tensorflow to use

tensorflow:x.y.z-cpu (not available for latest version?)

GPU capable:

tensorflow:x.y.z-distroless

tensorflow:x.y.z

module load singularity

singularity pull docker://uvarc/tensorflow:x.y.z

Replace old version of tensorflow in batch scripts with new version

```
singularity run --nv ../tensorflow-2.1.0-py37.sif Method2.py
```

becomes

```
singularity run --nv ../tensorflow_2.4.1.sif Method2.py
```

Model to narrow bounds of ReE

```
k = tf.keras.Input(shape=(45))
QQ = tf.keras.Input(shape=(45))
x_b = tf.keras.Input(shape=(45))
t = tf.keras.Input(shape=(45))
#kins = tf.keras.Input(shape=(4,45))

phi = tf.keras.Input(shape=(45))
f = tf.keras.Input(shape=(45))
ReH = tf.keras.Input(shape=(45)) #Randomly sampled CFFs from the localfit
ReE = tf.keras.Input(shape=(45))
ReHT = tf.keras.Input(shape=(45))

x = tf.keras.layers.Concatenate(axis=1)([k, QQ, x_b, t, phi, f, ReH, ReE, ReHT])
x = tf.keras.layers.Reshape((9,45))(x)

#Input = tf.keras.Layers.Input(shape=(5,45),)
x = tf.keras.layers.Conv1D(45, 1, activation='relu', input_shape=(9,45))(x)
x = tf.keras.layers.Dense(45, activation="relu")(x)
x = tf.keras.layers.Dense(45, activation="relu")(x)
outputs = tf.keras.layers.Dense(1)(x)

boundingFitModel = tf.keras.Model(inputs=[k, QQ, x_b, t, phi, f, ReH, ReE, ReHT], outputs=outputs, name="boundingFitModel")
```