"""

Utilties that aid in building the magic recs graph.

"""

import re

import tensorflow.compat.v1 as tf

def get\_trainable\_variables(all\_trainable\_variables, trainable\_regexes):

"""Returns a subset of trainable variables for training.

Given a collection of trainable variables, this will return all those that match the given regexes.

Will also log those variables.

Args:

all\_trainable\_variables (a collection of trainable tf.Variable): The variables to search through.

trainable\_regexes (a collection of regexes): Variables that match any regex will be included.

Returns a list of tf.Variable

"""

if trainable\_regexes is None or len(trainable\_regexes) == 0:

tf.logging.info("No trainable regexes found. Not using get\_trainable\_variables behavior.")

return None

assert any(

tf.is\_tensor(var) for var in all\_trainable\_variables

), f"Non TF variable found: {all\_trainable\_variables}"

trainable\_variables = list(

filter(

lambda var: any(re.match(regex, var.name, re.IGNORECASE) for regex in trainable\_regexes),

all\_trainable\_variables,

)

)

tf.logging.info(f"Using filtered trainable variables: {trainable\_variables}")

assert (

trainable\_variables

), "Did not find trainable variables after filtering after filtering from {} number of vars originaly. All vars: {} and train regexes: {}".format(

len(all\_trainable\_variables), all\_trainable\_variables, trainable\_regexes

)

return trainable\_variables