

In []:

```
'''This code was written by Danny Joel Devarapalli, Dheeraj Mavilla, Prashanth Karri, H  
arshit Gorijavolu'''
```

In []:

```
from google.colab import drive  
drive.mount('/content/gdrive')
```

Go to this URL in a browser: https://accounts.google.com/o/oauth2/auth?client_id=947318989803-6bn6qk8qdgf4n4g3pfee6491hc0brc4i.apps.googleusercontent.com&redirect_uri=urn%3aietf%3awg%3aoauth%3a2.0%3aob&response_type=code&scope=email%20https%3a%2f%2fwww.googleapis.com%2fauth%2fdocs.test%20https%3a%2f%2fwww.googleapis.com%2fauth%2fdrive%20https%3a%2f%2fwww.googleapis.com%2fauth%2fdrive.photos.readonly%20https%3a%2f%2fwww.googleapis.com%2fauth%2fpeopleapi.readonly

Enter your authorization code:

.....

Mounted at /content/gdrive

```
!pip install -U -q PyDrive
from pydrive.auth import GoogleAuth
from pydrive.drive import GoogleDrive
import google.colab
from oauth2client.client import GoogleCredentials
import glob, os

folder_id = '/content/drive/My Drive/Colab Backup'
dir_to_backup = '/content/drive/My Drive/Colab Backup/Copy Big data'
mycreds_file_contents = '{"access_token": "ya29.a0AfH6SMAfrsGMg6lBqN6LEZW484rDvGid96tpvYEFLT6pAWJpXNc6WyWDLaw5hKAjju46KDLPukTD9PMn81Zm9wQN5rTrq3AGQEHZ2GLSwu0gIqs3k3L6oBHUn2ttGiJFEXYS1FBrAEypIjq-nOb5axCpobIf05ooSfRUiT5NHIX", "client_id": "32555940559.apps.googleusercontent.com", "client_secret": "ZmssLNjJy2998hd4CTg2ejr2", "refresh_token": "1//05nkqfGkJ9maPCGYIARAAGAUSNWf-L9IrGmqCGJIBvoEXeyvUaLOBd9teJk_IQ2HFUPK6fhGTqCDhDW4WKzWiierXV3c_EsJmMok", "token_expiry": "2020-05-14T17:28:32Z", "token_uri": "https://oauth2.googleapis.com/token", "user_agent": "Python client library", "revoke_uri": "https://oauth2.googleapis.com/revoke", "id_token": {"iss": "https://accounts.google.com", "azp": "32555940559.apps.googleusercontent.com", "aud": "32555940559.apps.googleusercontent.com", "sub": "113969137687744701622", "email": "dannydevarapalli6@gmail.com", "email_verified": true, "at_hash": "jrgrYi6CI30zNtf3crfE6Q", "iat": 1589473713, "exp": 1589477313}, "id_token_jwt": "eyJhbGciOiJIUzI1NiIsImtpZCI6ImMxNzcwODE0YmE2YTcwNjkzMzI5NDExZGEyZzZlOTBjMmJmNWl5MjcilLCJOeXAiOiJKV1QiLCJpc3MiOiJodHRwczovL2FjY291bnRzLmdvb2dsZS5jb20iLCJhenAiOiIzMTU1NTk0MDU1OS5hcHBzLmdvb2dsZXVzZXJjb250ZW50LmNvbSIzImF1ZCI6ImYNTU1OTQwNTU1LmFwcHMud29vZ2xldXNlcmNvbnRlbnQuY29tIiwic3ViIjoiaWTEzOTY5MTM3Njg3NzQ0NzAxNjIyIiwiaWF0IjkiYW5ueWRldmFyYXBhbGxpNkNbnWFBpbC5jb20iLCJlbWFBpbF92ZXJpZmllZCI6dHJ1ZSwiYXRfaGFzaCI6ImpyZ3J3aTZDSTNPek50ZjNjcmZFnlEiLCJpYXQiOjE1ODk0NzMTMsImV4cCI6MTU4OTQ3NzNmM30.UCYsQBAlYmDfjTH6xaIDB4KSq5fB-ug-DPTyFVMx9iLDSBUlvQ8pxzLHCXMI9slniRSYrgNrAewp7qHc7skJTTPjh34APsVsSB9WyEFnog5G0FAzX0pZ_c10bYY18BMgvXk6weXkF6GHmwSpmFLctVs7QEby0j3ehKyWeDLn4bqyoZcEM_OYSX6ZZj6s6XvJZ-hV84G23gqs0ndzJHBSD5dkXFrGcmFsCNMCfwRqtKoUoc3H25ceCdSJPlCQLA_Wu72ZddTwqFvgNLJDhnhodfhEZUIYyzAKPznXdgPTRt9pPkMg8scI0bVQShU0J6SOyWLHsR257jhPhS5MapUNBW", "token_response": {"access_token": "ya29.a0AfH6SMAfrsGMg6lBqN6LEZW484rDvGid96tpvYEFLT6pAWJpXNc6WyWDLaw5hKAjju46KDLPukTD9PMn81Zm9wQN5rTrq3AGQEHZ2GLSwu0gIqs3k3L6oBHUn2ttGiJFEXYS1FBrAEypIjq-nOb5axCpobIf05ooSfRUiT5NHIX", "expires_in": 3599, "scope": "https://www.googleapis.com/auth/appengine.admin https://www.googleapis.com/auth/userinfo.email https://www.googleapis.com/auth/accounts.reauth openid https://www.googleapis.com/auth/cloud-platform https://www.googleapis.com/auth/compute https://www.googleapis.com/auth/drive", "token_type": "Bearer", "id_token": "eyJhbGciOiJIUzI1NiIsImtpZCI6ImMxNzcwODE0YmE2YTcwNjkzMzI5NDExZGEyZzZlOTBjMmJmNWl5MjcilLCJOeXAiOiJKV1QiLCJpc3MiOiJodHRwczovL2FjY291bnRzLmdvb2dsZS5jb20iLCJhenAiOiIzMTU1NTk0MDU1OS5hcHBzLmdvb2dsZXVzZXJjb250ZW50LmNvbSIzImF1ZCI6ImYNTU1OTQwNTU1LmFwcHMud29vZ2xldXNlcmNvbnRlbnQuY29tIiwic3ViIjoiaWTEzOTY5MTM3Njg3NzQ0NzAxNjIyIiwiaWF0IjkiYW5ueWRldmFyYXBhbGxpNkNbnWFBpbC5jb20iLCJlbWFBpbF92ZXJpZmllZCI6dHJ1ZSwiYXRfaGFzaCI6ImpyZ3J3aTZDSTNPek50ZjNjcmZFnlEiLCJpYXQiOjE1ODk0NzMTMsImV4cCI6MTU4OTQ3NzNmM30.UCYsQBAlYmDfjTH6xaIDB4KSq5fB-ug-DPTyFVMx9iLDSBUlvQ8pxzLHCXMI9slniRSYrgNrAewp7qHc7skJTTPjh34APsVsSB9WyEFnog5G0FAzX0pZ_c10bYY18BMgvXk6weXkF6GHmwSpmFLctVs7QEby0j3ehKyWeDLn4bqyoZcEM_OYSX6ZZj6s6XvJZ-hV84G23gqs0ndzJHBSD5dkXFrGcmFsCNMCfwRqtKoUoc3H25ceCdSJPlCQLA_Wu72ZddTwqFvgNLJDhnhodfhEZUIYyzAKPznXdgPTRt9pPkMg8scI0bVQShU0J6SOyWLHsR257jhPhS5MapUNBW"}, "scopes": [], "token_info_uri": null, "invalid": false, "_class": "GoogleCredentials", "_module": "oauth2client.client"}'
mycreds_file = 'mycreds.json'

with open(mycreds_file, 'w') as f:
    f.write(mycreds_file_contents)

def authenticate_pydrive():
    gauth = GoogleAuth()

# https://stackoverflow.com/a/24542604/5096199
# Try to load saved client credentials
```

```
gauth.LoadCredentialsFile(mycreds_file)
if gauth.credentials is None:
    # Authenticate if they're not there
    google.colab.auth.authenticate_user()
    gauth.credentials = GoogleCredentials.get_application_default()
elif gauth.access_token_expired:
    # Refresh them if expired
    gauth.Refresh()
else:
    # Initialize the saved creds
    gauth.Authorize()
# Save the current credentials to a file
gauth.SaveCredentialsFile(mycreds_file)

drive = GoogleDrive(gauth)
return drive

def backup_pydrive():
    drive = authenticate_pydrive()
    paths = list(glob.iglob(os.path.join(dir_to_backup, '**'), recursive=True))
    print(paths)

    # Delete existing files
    files = drive.ListFile({'q': "'%s' in parents" % folder_id}).GetList()
    for file in files:
        if file['title'] in paths:
            file.Delete()

    for path in paths:
        if os.path.isdir(path) or os.stat(path).st_size == 0:
            continue
        file = drive.CreateFile({'title': path, 'parents':
            [{"kind": "drive#fileLink", "id": folder_id}]})
        file.SetContentFile(path)
        file.Upload()
        print('Backed up %s' % path)

def restore_pydrive():
    drive = authenticate_pydrive()
    files = drive.ListFile({'q': "'%s' in parents" % folder_id}).GetList()
    for file in files:
        os.makedirs(os.path.dirname(file['title']), exist_ok=True)
        file.GetContentFile(file['title'])
        print('Restored %s' % file['title'])

authenticate_pydrive()
!cat {mycreds_file}
```

```
{"access_token": "ya29.a0AfH6SMAfrsGMg6lBqN6LEZW484rDvGid96tpvYEFLT6pAWJpX  
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l, "token_uri": "https://oauth2.googleapis.com/token", "user_agent": "Pyth  
on client library", "revoke_uri": "https://oauth2.googleapis.com/revoke",  
"id_token": null, "id_token_jwt": null, "token_response": null, "scopes":  
[], "token_info_uri": null, "invalid": false, "_class": "GoogleCredential  
s", "_module": "oauth2client.client"}
```

In []:

```
import pickle  
X = pickle.load(open("/content/gdrive/My Drive/Skin Cancer DATA/equal/X_equal.pickle",  
"rb"))  
y = pickle.load(open("/content/gdrive/My Drive/Skin Cancer DATA/equal/y_equal.pickle",  
"rb"))
```

In []:

```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import os
from sklearn.utils import shuffle
import cv2
import tensorflow

from tensorflow.keras.models import load_model
from sklearn.datasets import load_files

from tensorflow.keras import applications
from tensorflow.keras.preprocessing.image import ImageDataGenerator
from tensorflow.keras import optimizers
from tensorflow.keras.models import Sequential, Model, load_model
from tensorflow.keras.layers import Dense, Dropout, Flatten, Conv2D, MaxPool2D, GlobalAveragePooling2D
from tensorflow.keras.callbacks import TensorBoard, ReduceLROnPlateau, ModelCheckpoint

from tensorflow.keras.models import Model
from tensorflow.keras.optimizers import Adam
from tensorflow.keras.applications.resnet50 import preprocess_input

base_model1 = applications.InceptionResNetV2(
    weights= 'imagenet',
    include_top=False,
    input_shape= (224,224,3))

x = base_model1.output
x = Flatten()(x)
x = Dropout(0.4)(x)
predictions = Dense(3, activation= 'softmax')(x)
model = Model(inputs = base_model1.input, outputs = predictions)

from tensorflow.keras.optimizers import SGD, Adam
adam = Adam(lr=0.0001)
model.compile(optimizer= adam, loss='sparse_categorical_crossentropy', metrics=['accuracy'])

sgd = SGD(lr=0.0001, momentum=0.9)

# sgd = SGD(lr=lr_rate, momentum=0.9, decay=decay, nesterov=False)
print(model.summary())

hist_big = model.fit(X,y, batch_size = 32, epochs = 10, validation_split = 0.2)

from keras.models import model_from_json
```

```
from keras.models import load_model
model_json = model.to_json()
with open("/content/drive/My Drive/Skin Cancer DATA/2modelInceptionv2imgSkin.json", "w"
) as json_file :
    json_file.write(model_json)

model.save_weights("/content/drive/My Drive/Skin Cancer DATA/2modelInceptionv2imgSkin.h
5")
print("Saved model to disk")

model.save('/content/drive/My Drive/Skin Cancer DATA/2CNNInceptionv2imgSkin.h5')

import matplotlib.pyplot as plt

print(hist_big.history.keys())
plt.figure(1)
plt.plot(hist_big.history['accuracy'])
plt.plot(hist_big.history['val_accuracy'])
plt.title('InceptionV2skin accuracy')
plt.ylabel('accuracy')
plt.xlabel('epoch')
plt.legend(['train', 'validation'], loc='upper left')
plt.show()

print(hist_big.history.keys())
plt.figure(2)
plt.plot(hist_big.history['loss'])
plt.plot(hist_big.history['val_loss'])
plt.title('InceptionV2skin loss')
plt.ylabel('loss')
plt.xlabel('epoch')
plt.legend(['Train', 'Validation'], loc='upper left')
plt.show()
```

Downloading data from https://storage.googleapis.com/tensorflow/keras-applications/inception_resnet_v2/inception_resnet_v2_weights_tf_dim_ordering_tf_kernels_notop.h5

219062272/219055592 [=====] - 5s 0us/step

Model: "model"

Layer (type) to	Output Shape	Param #	Connected
=====			
input_1 (InputLayer)	[(None, 224, 224, 3) 0		
conv2d (Conv2D) [0][0]	(None, 111, 111, 32) 864		input_1
batch_normalization (BatchNorma [0]	(None, 111, 111, 32) 96		conv2d[0]
activation (Activation) malization[0][0]	(None, 111, 111, 32) 0		batch_nor
conv2d_1 (Conv2D) n[0][0]	(None, 109, 109, 32) 9216		activatio
batch_normalization_1 (BatchNor [0][0]	(None, 109, 109, 32) 96		conv2d_1
activation_1 (Activation) malization_1[0][0]	(None, 109, 109, 32) 0		batch_nor
conv2d_2 (Conv2D) n_1[0][0]	(None, 109, 109, 64) 18432		activatio
batch_normalization_2 (BatchNor [0][0]	(None, 109, 109, 64) 192		conv2d_2
activation_2 (Activation) malization_2[0][0]	(None, 109, 109, 64) 0		batch_nor
max_pooling2d (MaxPooling2D) n_2[0][0]	(None, 54, 54, 64) 0		activatio
conv2d_3 (Conv2D) ng2d[0][0]	(None, 54, 54, 80) 5120		max_pooli
batch_normalization_3 (BatchNor [0][0]	(None, 54, 54, 80) 240		conv2d_3

activation_3 (Activation) malization_3[0][0]	(None, 54, 54, 80)	0	batch_nor
conv2d_4 (Conv2D) n_3[0][0]	(None, 52, 52, 192)	138240	activatio
batch_normalization_4 (BatchNor [0][0]	(None, 52, 52, 192)	576	conv2d_4
activation_4 (Activation) malization_4[0][0]	(None, 52, 52, 192)	0	batch_nor
max_pooling2d_1 (MaxPooling2D) n_4[0][0]	(None, 25, 25, 192)	0	activatio
conv2d_8 (Conv2D) ng2d_1[0][0]	(None, 25, 25, 64)	12288	max_pooli
batch_normalization_8 (BatchNor [0][0]	(None, 25, 25, 64)	192	conv2d_8
activation_8 (Activation) malization_8[0][0]	(None, 25, 25, 64)	0	batch_nor
conv2d_6 (Conv2D) ng2d_1[0][0]	(None, 25, 25, 48)	9216	max_pooli
conv2d_9 (Conv2D) n_8[0][0]	(None, 25, 25, 96)	55296	activatio
batch_normalization_6 (BatchNor [0][0]	(None, 25, 25, 48)	144	conv2d_6
batch_normalization_9 (BatchNor [0][0]	(None, 25, 25, 96)	288	conv2d_9
activation_6 (Activation) malization_6[0][0]	(None, 25, 25, 48)	0	batch_nor
activation_9 (Activation) malization_9[0][0]	(None, 25, 25, 96)	0	batch_nor
average_pooling2d (AveragePooli ng2d_1[0][0]	(None, 25, 25, 192)	0	max_pooli

conv2d_5 (Conv2D) ng2d_1[0][0]	(None, 25, 25, 96)	18432	max_pooli
conv2d_7 (Conv2D) n_6[0][0]	(None, 25, 25, 64)	76800	activatio
conv2d_10 (Conv2D) n_9[0][0]	(None, 25, 25, 96)	82944	activatio
conv2d_11 (Conv2D) ooling2d[0][0]	(None, 25, 25, 64)	12288	average_p
batch_normalization_5 (BatchNor [0][0])	(None, 25, 25, 96)	288	conv2d_5
batch_normalization_7 (BatchNor [0][0])	(None, 25, 25, 64)	192	conv2d_7
batch_normalization_10 (BatchNo [0][0])	(None, 25, 25, 96)	288	conv2d_10
batch_normalization_11 (BatchNo [0][0])	(None, 25, 25, 64)	192	conv2d_11
activation_5 (Activation) malization_5[0][0]	(None, 25, 25, 96)	0	batch_nor
activation_7 (Activation) malization_7[0][0]	(None, 25, 25, 64)	0	batch_nor
activation_10 (Activation) malization_10[0][0]	(None, 25, 25, 96)	0	batch_nor
activation_11 (Activation) malization_11[0][0]	(None, 25, 25, 64)	0	batch_nor
mixed_5b (Concatenate) n_5[0][0]	(None, 25, 25, 320)	0	activatio
n_7[0][0]			activatio
n_10[0][0]			activatio
n_11[0][0]			activatio
conv2d_15 (Conv2D) [0][0]	(None, 25, 25, 32)	10240	mixed_5b

batch_normalization_15 (BatchNo [0][0])	(None, 25, 25, 32)	96	conv2d_15
activation_15 (Activation) normalization_15[0][0]	(None, 25, 25, 32)	0	batch_nor
conv2d_13 (Conv2D) [0][0]	(None, 25, 25, 32)	10240	mixed_5b
conv2d_16 (Conv2D) n_15[0][0]	(None, 25, 25, 48)	13824	activatio
batch_normalization_13 (BatchNo [0][0])	(None, 25, 25, 32)	96	conv2d_13
batch_normalization_16 (BatchNo [0][0])	(None, 25, 25, 48)	144	conv2d_16
activation_13 (Activation) malization_13[0][0]	(None, 25, 25, 32)	0	batch_nor
activation_16 (Activation) malization_16[0][0]	(None, 25, 25, 48)	0	batch_nor
conv2d_12 (Conv2D) [0][0]	(None, 25, 25, 32)	10240	mixed_5b
conv2d_14 (Conv2D) n_13[0][0]	(None, 25, 25, 32)	9216	activatio
conv2d_17 (Conv2D) n_16[0][0]	(None, 25, 25, 64)	27648	activatio
batch_normalization_12 (BatchNo [0][0])	(None, 25, 25, 32)	96	conv2d_12
batch_normalization_14 (BatchNo [0][0])	(None, 25, 25, 32)	96	conv2d_14
batch_normalization_17 (BatchNo [0][0])	(None, 25, 25, 64)	192	conv2d_17
activation_12 (Activation) malization_12[0][0]	(None, 25, 25, 32)	0	batch_nor

activation_14 (Activation) malization_14[0][0]	(None, 25, 25, 32)	0	batch_nor
activation_17 (Activation) malization_17[0][0]	(None, 25, 25, 64)	0	batch_nor
block35_1_mixed (Concatenate) n_12[0][0]	(None, 25, 25, 128)	0	activatio
n_14[0][0]			activatio
n_17[0][0]			activatio
block35_1_conv (Conv2D) _mixed[0][0]	(None, 25, 25, 320)	41280	block35_1
block35_1 (Lambda) [0][0]	(None, 25, 25, 320)	0	mixed_5b
_conv[0][0]			block35_1
block35_1_ac (Activation) [0][0]	(None, 25, 25, 320)	0	block35_1
conv2d_21 (Conv2D) _ac[0][0]	(None, 25, 25, 32)	10240	block35_1
batch_normalization_21 (BatchNo [0][0])	(None, 25, 25, 32)	96	conv2d_21
activation_21 (Activation) malization_21[0][0]	(None, 25, 25, 32)	0	batch_nor
conv2d_19 (Conv2D) _ac[0][0]	(None, 25, 25, 32)	10240	block35_1
conv2d_22 (Conv2D) n_21[0][0]	(None, 25, 25, 48)	13824	activatio
batch_normalization_19 (BatchNo [0][0])	(None, 25, 25, 32)	96	conv2d_19
batch_normalization_22 (BatchNo [0][0])	(None, 25, 25, 48)	144	conv2d_22
activation_19 (Activation) malization_19[0][0]	(None, 25, 25, 32)	0	batch_nor

activation_22 (Activation) malization_22[0][0]	(None, 25, 25, 48)	0	batch_nor
conv2d_18 (Conv2D) _ac[0][0]	(None, 25, 25, 32)	10240	block35_1
conv2d_20 (Conv2D) n_19[0][0]	(None, 25, 25, 32)	9216	activatio
conv2d_23 (Conv2D) n_22[0][0]	(None, 25, 25, 64)	27648	activatio
batch_normalization_18 (BatchNo [0][0])	(None, 25, 25, 32)	96	conv2d_18
batch_normalization_20 (BatchNo [0][0])	(None, 25, 25, 32)	96	conv2d_20
batch_normalization_23 (BatchNo [0][0])	(None, 25, 25, 64)	192	conv2d_23
activation_18 (Activation) malization_18[0][0]	(None, 25, 25, 32)	0	batch_nor
activation_20 (Activation) malization_20[0][0]	(None, 25, 25, 32)	0	batch_nor
activation_23 (Activation) malization_23[0][0]	(None, 25, 25, 64)	0	batch_nor
block35_2_mixed (Concatenate) n_18[0][0]	(None, 25, 25, 128)	0	activatio
n_20[0][0]			activatio
n_23[0][0]			activatio
block35_2_conv (Conv2D) _mixed[0][0]	(None, 25, 25, 320)	41280	block35_2
block35_2 (Lambda) _ac[0][0]	(None, 25, 25, 320)	0	block35_1
_conv[0][0]			block35_2
block35_2_ac (Activation) [0][0]	(None, 25, 25, 320)	0	block35_2

conv2d_27 (Conv2D) _ac[0][0]	(None, 25, 25, 32)	10240	block35_2
batch_normalization_27 (BatchNo [0][0]	(None, 25, 25, 32)	96	conv2d_27
activation_27 (Activation) malization_27[0][0]	(None, 25, 25, 32)	0	batch_nor
conv2d_25 (Conv2D) _ac[0][0]	(None, 25, 25, 32)	10240	block35_2
conv2d_28 (Conv2D) n_27[0][0]	(None, 25, 25, 48)	13824	activatio
batch_normalization_25 (BatchNo [0][0]	(None, 25, 25, 32)	96	conv2d_25
batch_normalization_28 (BatchNo [0][0]	(None, 25, 25, 48)	144	conv2d_28
activation_25 (Activation) malization_25[0][0]	(None, 25, 25, 32)	0	batch_nor
activation_28 (Activation) malization_28[0][0]	(None, 25, 25, 48)	0	batch_nor
conv2d_24 (Conv2D) _ac[0][0]	(None, 25, 25, 32)	10240	block35_2
conv2d_26 (Conv2D) n_25[0][0]	(None, 25, 25, 32)	9216	activatio
conv2d_29 (Conv2D) n_28[0][0]	(None, 25, 25, 64)	27648	activatio
batch_normalization_24 (BatchNo [0][0]	(None, 25, 25, 32)	96	conv2d_24
batch_normalization_26 (BatchNo [0][0]	(None, 25, 25, 32)	96	conv2d_26
batch_normalization_29 (BatchNo [0][0]	(None, 25, 25, 64)	192	conv2d_29

activation_24 (Activation) malization_24[0][0]	(None, 25, 25, 32)	0	batch_nor
activation_26 (Activation) malization_26[0][0]	(None, 25, 25, 32)	0	batch_nor
activation_29 (Activation) malization_29[0][0]	(None, 25, 25, 64)	0	batch_nor
block35_3_mixed (Concatenate) n_24[0][0]	(None, 25, 25, 128)	0	activatio
n_26[0][0]			activatio
n_29[0][0]			activatio
block35_3_conv (Conv2D) _mixed[0][0]	(None, 25, 25, 320)	41280	block35_3
block35_3 (Lambda) _ac[0][0]	(None, 25, 25, 320)	0	block35_2
_conv[0][0]			block35_3
block35_3_ac (Activation) [0][0]	(None, 25, 25, 320)	0	block35_3
conv2d_33 (Conv2D) _ac[0][0]	(None, 25, 25, 32)	10240	block35_3
batch_normalization_33 (BatchNo [0][0]	(None, 25, 25, 32)	96	conv2d_33
activation_33 (Activation) malization_33[0][0]	(None, 25, 25, 32)	0	batch_nor
conv2d_31 (Conv2D) _ac[0][0]	(None, 25, 25, 32)	10240	block35_3
conv2d_34 (Conv2D) n_33[0][0]	(None, 25, 25, 48)	13824	activatio
batch_normalization_31 (BatchNo [0][0]	(None, 25, 25, 32)	96	conv2d_31
batch_normalization_34 (BatchNo [0][0]	(None, 25, 25, 48)	144	conv2d_34

activation_31 (Activation) malization_31[0][0]	(None, 25, 25, 32)	0	batch_nor
activation_34 (Activation) malization_34[0][0]	(None, 25, 25, 48)	0	batch_nor
conv2d_30 (Conv2D) _ac[0][0]	(None, 25, 25, 32)	10240	block35_3
conv2d_32 (Conv2D) n_31[0][0]	(None, 25, 25, 32)	9216	activatio
conv2d_35 (Conv2D) n_34[0][0]	(None, 25, 25, 64)	27648	activatio
batch_normalization_30 (BatchNo [0][0])	(None, 25, 25, 32)	96	conv2d_30
batch_normalization_32 (BatchNo [0][0])	(None, 25, 25, 32)	96	conv2d_32
batch_normalization_35 (BatchNo [0][0])	(None, 25, 25, 64)	192	conv2d_35
activation_30 (Activation) malization_30[0][0]	(None, 25, 25, 32)	0	batch_nor
activation_32 (Activation) malization_32[0][0]	(None, 25, 25, 32)	0	batch_nor
activation_35 (Activation) malization_35[0][0]	(None, 25, 25, 64)	0	batch_nor
block35_4_mixed (Concatenate) n_30[0][0] n_32[0][0] n_35[0][0]	(None, 25, 25, 128)	0	activatio activatio activatio
block35_4_conv (Conv2D) _mixed[0][0]	(None, 25, 25, 320)	41280	block35_4
block35_4 (Lambda) _ac[0][0]	(None, 25, 25, 320)	0	block35_3 block35_4

_conv[0][0]

<u>block35_4_ac (Activation)</u> [0][0]	(None, 25, 25, 320)	0	block35_4
<u>conv2d_39 (Conv2D)</u> _ac[0][0]	(None, 25, 25, 32)	10240	block35_4
<u>batch_normalization_39 (BatchNo</u> [0][0]	(None, 25, 25, 32)	96	conv2d_39
<u>activation_39 (Activation)</u> malization_39[0][0]	(None, 25, 25, 32)	0	batch_nor
<u>conv2d_37 (Conv2D)</u> _ac[0][0]	(None, 25, 25, 32)	10240	block35_4
<u>conv2d_40 (Conv2D)</u> n_39[0][0]	(None, 25, 25, 48)	13824	activatio
<u>batch_normalization_37 (BatchNo</u> [0][0]	(None, 25, 25, 32)	96	conv2d_37
<u>batch_normalization_40 (BatchNo</u> [0][0]	(None, 25, 25, 48)	144	conv2d_40
<u>activation_37 (Activation)</u> malization_37[0][0]	(None, 25, 25, 32)	0	batch_nor
<u>activation_40 (Activation)</u> malization_40[0][0]	(None, 25, 25, 48)	0	batch_nor
<u>conv2d_36 (Conv2D)</u> _ac[0][0]	(None, 25, 25, 32)	10240	block35_4
<u>conv2d_38 (Conv2D)</u> n_37[0][0]	(None, 25, 25, 32)	9216	activatio
<u>conv2d_41 (Conv2D)</u> n_40[0][0]	(None, 25, 25, 64)	27648	activatio
<u>batch_normalization_36 (BatchNo</u> [0][0]	(None, 25, 25, 32)	96	conv2d_36
<u>batch_normalization_38 (BatchNo</u> [0][0]	(None, 25, 25, 32)	96	conv2d_38

batch_normalization_41 (BatchNo	(None, 25, 25, 64)	192	conv2d_41
[0][0]			
activation_36 (Activation)	(None, 25, 25, 32)	0	batch_nor
malization_36[0][0]			
activation_38 (Activation)	(None, 25, 25, 32)	0	batch_nor
malization_38[0][0]			
activation_41 (Activation)	(None, 25, 25, 64)	0	batch_nor
malization_41[0][0]			
block35_5_mixed (Concatenate)	(None, 25, 25, 128)	0	activatio
n_36[0][0]			activatio
n_38[0][0]			activatio
n_41[0][0]			
block35_5_conv (Conv2D)	(None, 25, 25, 320)	41280	block35_5
_mixed[0][0]			
block35_5 (Lambda)	(None, 25, 25, 320)	0	block35_4
_ac[0][0]			block35_5
_conv[0][0]			
block35_5_ac (Activation)	(None, 25, 25, 320)	0	block35_5
[0][0]			
conv2d_45 (Conv2D)	(None, 25, 25, 32)	10240	block35_5
_ac[0][0]			
batch_normalization_45 (BatchNo	(None, 25, 25, 32)	96	conv2d_45
[0][0]			
activation_45 (Activation)	(None, 25, 25, 32)	0	batch_nor
malization_45[0][0]			
conv2d_43 (Conv2D)	(None, 25, 25, 32)	10240	block35_5
_ac[0][0]			
conv2d_46 (Conv2D)	(None, 25, 25, 48)	13824	activatio
n_45[0][0]			
batch_normalization_43 (BatchNo	(None, 25, 25, 32)	96	conv2d_43

[0][0]

batch_normalization_46 (BatchNo	(None, 25, 25, 48)	144	conv2d_46
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activation_43 (Activation)	(None, 25, 25, 32)	0	batch_nor
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activation_46 (Activation)	(None, 25, 25, 48)	0	batch_nor
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conv2d_42 (Conv2D)	(None, 25, 25, 32)	10240	block35_5
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conv2d_44 (Conv2D)	(None, 25, 25, 32)	9216	activatio
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conv2d_47 (Conv2D)	(None, 25, 25, 64)	27648	activatio
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batch_normalization_42 (BatchNo	(None, 25, 25, 32)	96	conv2d_42
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batch_normalization_44 (BatchNo	(None, 25, 25, 32)	96	conv2d_44
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batch_normalization_47 (BatchNo	(None, 25, 25, 64)	192	conv2d_47
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activation_42 (Activation)	(None, 25, 25, 32)	0	batch_nor
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activation_44 (Activation)	(None, 25, 25, 32)	0	batch_nor
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activation_47 (Activation)	(None, 25, 25, 64)	0	batch_nor
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block35_6_mixed (Concatenate)	(None, 25, 25, 128)	0	activatio
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n_44[0][0]			activatio
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n_47[0][0]			activatio
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block35_6_conv (Conv2D)	(None, 25, 25, 320)	41280	block35_6
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block35_6 (Lambda) _ac[0][0]	(None, 25, 25, 320)	0	block35_5 block35_6
block35_6_ac (Activation) [0][0]	(None, 25, 25, 320)	0	block35_6
conv2d_51 (Conv2D) _ac[0][0]	(None, 25, 25, 32)	10240	block35_6
batch_normalization_51 (BatchNo [0][0]	(None, 25, 25, 32)	96	conv2d_51
activation_51 (Activation) malization_51[0][0]	(None, 25, 25, 32)	0	batch_nor
conv2d_49 (Conv2D) _ac[0][0]	(None, 25, 25, 32)	10240	block35_6
conv2d_52 (Conv2D) n_51[0][0]	(None, 25, 25, 48)	13824	activatio
batch_normalization_49 (BatchNo [0][0]	(None, 25, 25, 32)	96	conv2d_49
batch_normalization_52 (BatchNo [0][0]	(None, 25, 25, 48)	144	conv2d_52
activation_49 (Activation) malization_49[0][0]	(None, 25, 25, 32)	0	batch_nor
activation_52 (Activation) malization_52[0][0]	(None, 25, 25, 48)	0	batch_nor
conv2d_48 (Conv2D) _ac[0][0]	(None, 25, 25, 32)	10240	block35_6
conv2d_50 (Conv2D) n_49[0][0]	(None, 25, 25, 32)	9216	activatio
conv2d_53 (Conv2D) n_52[0][0]	(None, 25, 25, 64)	27648	activatio
batch_normalization_48 (BatchNo	(None, 25, 25, 32)	96	conv2d_48

[0][0]

batch_normalization_50 (BatchNo	(None, 25, 25, 32)	96	conv2d_50
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batch_normalization_53 (BatchNo	(None, 25, 25, 64)	192	conv2d_53
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activation_48 (Activation)	(None, 25, 25, 32)	0	batch_nor
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activation_50 (Activation)	(None, 25, 25, 32)	0	batch_nor
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activation_53 (Activation)	(None, 25, 25, 64)	0	batch_nor
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block35_7_mixed (Concatenate)	(None, 25, 25, 128)	0	activatio
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n_48[0][0]			activatio
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n_50[0][0]			activatio
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n_53[0][0]			
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block35_7_conv (Conv2D)	(None, 25, 25, 320)	41280	block35_7
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block35_7 (Lambda)	(None, 25, 25, 320)	0	block35_6
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_ac[0][0]			block35_7
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_conv[0][0]			
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block35_7_ac (Activation)	(None, 25, 25, 320)	0	block35_7
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conv2d_57 (Conv2D)	(None, 25, 25, 32)	10240	block35_7
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batch_normalization_57 (BatchNo	(None, 25, 25, 32)	96	conv2d_57
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activation_57 (Activation)	(None, 25, 25, 32)	0	batch_nor
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conv2d_55 (Conv2D)	(None, 25, 25, 32)	10240	block35_7
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conv2d_58 (Conv2D) n_57[0][0]	(None, 25, 25, 48)	13824	activation_57[0][0]
batch_normalization_55 (Batch Normalization) [0][0]	(None, 25, 25, 32)	96	conv2d_55[0][0]
batch_normalization_58 (Batch Normalization) [0][0]	(None, 25, 25, 48)	144	conv2d_58[0][0]
activation_55 (Activation) malization_55[0][0]	(None, 25, 25, 32)	0	batch_normalization_55[0][0]
activation_58 (Activation) malization_58[0][0]	(None, 25, 25, 48)	0	batch_normalization_58[0][0]
conv2d_54 (Conv2D) _ac[0][0]	(None, 25, 25, 32)	10240	block35_7[0][0]
conv2d_56 (Conv2D) n_55[0][0]	(None, 25, 25, 32)	9216	activation_55[0][0]
conv2d_59 (Conv2D) n_58[0][0]	(None, 25, 25, 64)	27648	activation_58[0][0]
batch_normalization_54 (Batch Normalization) [0][0]	(None, 25, 25, 32)	96	conv2d_54[0][0]
batch_normalization_56 (Batch Normalization) [0][0]	(None, 25, 25, 32)	96	conv2d_56[0][0]
batch_normalization_59 (Batch Normalization) [0][0]	(None, 25, 25, 64)	192	conv2d_59[0][0]
activation_54 (Activation) malization_54[0][0]	(None, 25, 25, 32)	0	batch_normalization_54[0][0]
activation_56 (Activation) malization_56[0][0]	(None, 25, 25, 32)	0	batch_normalization_56[0][0]
activation_59 (Activation) malization_59[0][0]	(None, 25, 25, 64)	0	batch_normalization_59[0][0]
block35_8_mixed (Concatenate) n_54[0][0]	(None, 25, 25, 128)	0	activation_54[0][0]
n_56[0][0]			activation_56[0][0]
			activation_59[0][0]

n_59[0][0]

block35_8_conv (Conv2D) _mixed[0][0]	(None, 25, 25, 320)	41280	block35_8
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block35_8 (Lambda) _ac[0][0]	(None, 25, 25, 320)	0	block35_7
_conv[0][0]			block35_8

block35_8_ac (Activation) [0][0]	(None, 25, 25, 320)	0	block35_8
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conv2d_63 (Conv2D) _ac[0][0]	(None, 25, 25, 32)	10240	block35_8
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batch_normalization_63 (BatchNo [0][0])	(None, 25, 25, 32)	96	conv2d_63
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activation_63 (Activation) malization_63[0][0]	(None, 25, 25, 32)	0	batch_nor
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conv2d_61 (Conv2D) _ac[0][0]	(None, 25, 25, 32)	10240	block35_8
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conv2d_64 (Conv2D) n_63[0][0]	(None, 25, 25, 48)	13824	activatio
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batch_normalization_61 (BatchNo [0][0])	(None, 25, 25, 32)	96	conv2d_61
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batch_normalization_64 (BatchNo [0][0])	(None, 25, 25, 48)	144	conv2d_64
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activation_61 (Activation) malization_61[0][0]	(None, 25, 25, 32)	0	batch_nor
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activation_64 (Activation) malization_64[0][0]	(None, 25, 25, 48)	0	batch_nor
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conv2d_60 (Conv2D) _ac[0][0]	(None, 25, 25, 32)	10240	block35_8
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conv2d_62 (Conv2D) n_61[0][0]	(None, 25, 25, 32)	9216	activatio
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conv2d_65 (Conv2D) n_64[0][0]	(None, 25, 25, 64)	27648	activation_65[0][0]
batch_normalization_60 (Batch Normalization) [0][0]	(None, 25, 25, 32)	96	conv2d_60[0][0]
batch_normalization_62 (Batch Normalization) [0][0]	(None, 25, 25, 32)	96	conv2d_62[0][0]
batch_normalization_65 (Batch Normalization) [0][0]	(None, 25, 25, 64)	192	conv2d_65[0][0]
activation_60 (Activation) malization_60[0][0]	(None, 25, 25, 32)	0	batch_normalization_60[0][0]
activation_62 (Activation) malization_62[0][0]	(None, 25, 25, 32)	0	batch_normalization_62[0][0]
activation_65 (Activation) malization_65[0][0]	(None, 25, 25, 64)	0	batch_normalization_65[0][0]
block35_9_mixed (Concatenate) n_60[0][0] n_62[0][0] n_65[0][0]	(None, 25, 25, 128)	0	activation_60[0][0] activation_62[0][0] activation_65[0][0]
block35_9_conv_mixed[0][0]	(None, 25, 25, 320)	41280	block35_9_conv_mixed[0][0]
block35_9_ac[0][0] _conv[0][0]	(None, 25, 25, 320)	0	block35_8_conv[0][0] block35_9_conv[0][0]
block35_9_ac[0][0]	(None, 25, 25, 320)	0	block35_9_conv[0][0]
conv2d_69 (Conv2D) _ac[0][0]	(None, 25, 25, 32)	10240	block35_9_conv[0][0]
batch_normalization_69 (Batch Normalization) [0][0]	(None, 25, 25, 32)	96	conv2d_69[0][0]
activation_69 (Activation) malization_69[0][0]	(None, 25, 25, 32)	0	batch_normalization_69[0][0]

conv2d_67 (Conv2D) _ac[0][0]	(None, 25, 25, 32)	10240	block35_9
conv2d_70 (Conv2D) n_69[0][0]	(None, 25, 25, 48)	13824	activation_69
batch_normalization_67 (Batch Normalization)	(None, 25, 25, 32)	96	conv2d_67
batch_normalization_70 (Batch Normalization)	(None, 25, 25, 48)	144	conv2d_70
activation_67 (Activation)	(None, 25, 25, 32)	0	batch_normalization_67
activation_70 (Activation)	(None, 25, 25, 48)	0	batch_normalization_70
conv2d_66 (Conv2D) _ac[0][0]	(None, 25, 25, 32)	10240	block35_9
conv2d_68 (Conv2D) n_67[0][0]	(None, 25, 25, 32)	9216	activation_67
conv2d_71 (Conv2D) n_70[0][0]	(None, 25, 25, 64)	27648	activation_70
batch_normalization_66 (Batch Normalization)	(None, 25, 25, 32)	96	conv2d_66
batch_normalization_68 (Batch Normalization)	(None, 25, 25, 32)	96	conv2d_68
batch_normalization_71 (Batch Normalization)	(None, 25, 25, 64)	192	conv2d_71
activation_66 (Activation)	(None, 25, 25, 32)	0	batch_normalization_66
activation_68 (Activation)	(None, 25, 25, 32)	0	batch_normalization_68
activation_71 (Activation)	(None, 25, 25, 64)	0	batch_normalization_71

block35_10_mixed (Concatenate)	(None, 25, 25, 128)	0	activation_66[0][0]
n_66[0][0]			activation_68[0][0]
n_68[0][0]			activation_71[0][0]
block35_10_conv (Conv2D)	(None, 25, 25, 320)	41280	block35_10_mixed[0][0]
block35_10 (Lambda)	(None, 25, 25, 320)	0	block35_10_conv[0][0]
_ac[0][0]			block35_10_conv[0][0]
block35_10_ac (Activation)	(None, 25, 25, 320)	0	block35_10_ac[0][0]
conv2d_73 (Conv2D)	(None, 25, 25, 256)	81920	conv2d_73[0][0]
batch_normalization_73 (Batch Normalization)	(None, 25, 25, 256)	768	conv2d_73[0][0]
activation_73 (Activation)	(None, 25, 25, 256)	0	batch_normalization_73[0][0]
conv2d_74 (Conv2D)	(None, 25, 25, 256)	589824	conv2d_74[0][0]
n_73[0][0]			activation_73[0][0]
batch_normalization_74 (Batch Normalization)	(None, 25, 25, 256)	768	conv2d_74[0][0]
activation_74 (Activation)	(None, 25, 25, 256)	0	batch_normalization_74[0][0]
conv2d_72 (Conv2D)	(None, 12, 12, 384)	1105920	conv2d_72[0][0]
conv2d_75 (Conv2D)	(None, 12, 12, 384)	884736	conv2d_75[0][0]
n_74[0][0]			activation_74[0][0]
batch_normalization_72 (Batch Normalization)	(None, 12, 12, 384)	1152	conv2d_72[0][0]
batch_normalization_75 (Batch Normalization)	(None, 12, 12, 384)	1152	conv2d_75[0][0]

activation_72 (Activation) malization_72[0][0]	(None, 12, 12, 384) 0	batch_nor
activation_75 (Activation) malization_75[0][0]	(None, 12, 12, 384) 0	batch_nor
max_pooling2d_2 (MaxPooling2D) 0_ac[0][0]	(None, 12, 12, 320) 0	block35_1
mixed_6a (Concatenate) n_72[0][0]	(None, 12, 12, 1088) 0	activatio
n_75[0][0]		activatio
ng2d_2[0][0]		max_pooli
conv2d_77 (Conv2D) [0][0]	(None, 12, 12, 128) 139264	mixed_6a
batch_normalization_77 (BatchNo [0][0]	(None, 12, 12, 128) 384	conv2d_77
activation_77 (Activation) malization_77[0][0]	(None, 12, 12, 128) 0	batch_nor
conv2d_78 (Conv2D) n_77[0][0]	(None, 12, 12, 160) 143360	activatio
batch_normalization_78 (BatchNo [0][0]	(None, 12, 12, 160) 480	conv2d_78
activation_78 (Activation) malization_78[0][0]	(None, 12, 12, 160) 0	batch_nor
conv2d_76 (Conv2D) [0][0]	(None, 12, 12, 192) 208896	mixed_6a
conv2d_79 (Conv2D) n_78[0][0]	(None, 12, 12, 192) 215040	activatio
batch_normalization_76 (BatchNo [0][0]	(None, 12, 12, 192) 576	conv2d_76
batch_normalization_79 (BatchNo [0][0]	(None, 12, 12, 192) 576	conv2d_79

activation_76 (Activation) malization_76[0][0]	(None, 12, 12, 192) 0	batch_nor
activation_79 (Activation) malization_79[0][0]	(None, 12, 12, 192) 0	batch_nor
block17_1_mixed (Concatenate) n_76[0][0]	(None, 12, 12, 384) 0	activatio
n_79[0][0]		activatio
block17_1_conv (Conv2D) _mixed[0][0]	(None, 12, 12, 1088) 418880	block17_1
block17_1 (Lambda) [0][0]	(None, 12, 12, 1088) 0	mixed_6a
_conv[0][0]		block17_1
block17_1_ac (Activation) [0][0]	(None, 12, 12, 1088) 0	block17_1
conv2d_81 (Conv2D) _ac[0][0]	(None, 12, 12, 128) 139264	block17_1
batch_normalization_81 (BatchNo [0][0]	(None, 12, 12, 128) 384	conv2d_81
activation_81 (Activation) malization_81[0][0]	(None, 12, 12, 128) 0	batch_nor
conv2d_82 (Conv2D) n_81[0][0]	(None, 12, 12, 160) 143360	activatio
batch_normalization_82 (BatchNo [0][0]	(None, 12, 12, 160) 480	conv2d_82
activation_82 (Activation) malization_82[0][0]	(None, 12, 12, 160) 0	batch_nor
conv2d_80 (Conv2D) _ac[0][0]	(None, 12, 12, 192) 208896	block17_1
conv2d_83 (Conv2D) n_82[0][0]	(None, 12, 12, 192) 215040	activatio
batch_normalization_80 (BatchNo	(None, 12, 12, 192) 576	conv2d_80

[0][0]

batch_normalization_83 (BatchNo	(None, 12, 12, 192)	576	conv2d_83
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activation_80 (Activation)	(None, 12, 12, 192)	0	batch_normalization_80[0][0]
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activation_83 (Activation)	(None, 12, 12, 192)	0	batch_normalization_83[0][0]
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block17_2_mixed (Concatenate)	(None, 12, 12, 384)	0	activation_80[0][0]
			activation_83[0][0]

block17_2_conv (Conv2D)	(None, 12, 12, 1088)	418880	block17_2_mixed[0][0]
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block17_2 (Lambda)	(None, 12, 12, 1088)	0	block17_1_ac[0][0]
			block17_2_conv[0][0]

block17_2_ac (Activation)	(None, 12, 12, 1088)	0	block17_2_ac[0][0]
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conv2d_85 (Conv2D)	(None, 12, 12, 128)	139264	block17_2_ac[0][0]
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batch_normalization_85 (BatchNo	(None, 12, 12, 128)	384	conv2d_85[0][0]
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activation_85 (Activation)	(None, 12, 12, 128)	0	batch_normalization_85[0][0]
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conv2d_86 (Conv2D)	(None, 12, 12, 160)	143360	activation_85[0][0]
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batch_normalization_86 (BatchNo	(None, 12, 12, 160)	480	conv2d_86[0][0]
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activation_86 (Activation)	(None, 12, 12, 160)	0	batch_normalization_86[0][0]
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conv2d_84 (Conv2D)	(None, 12, 12, 192)	208896	block17_2_ac[0][0]
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conv2d_87 (Conv2D) n_86[0][0]	(None, 12, 12, 192)	215040	activation_86[0][0]
batch_normalization_84 (Batch Normalization) [0][0]	(None, 12, 12, 192)	576	conv2d_84[0][0]
batch_normalization_87 (Batch Normalization) [0][0]	(None, 12, 12, 192)	576	conv2d_87[0][0]
activation_84 (Activation) malization_84[0][0]	(None, 12, 12, 192)	0	batch_normalization_84[0][0]
activation_87 (Activation) malization_87[0][0]	(None, 12, 12, 192)	0	batch_normalization_87[0][0]
block17_3_mixed (Concatenate) n_84[0][0]	(None, 12, 12, 384)	0	activation_84[0][0]
n_87[0][0]			activation_87[0][0]
block17_3_conv (Conv2D) _mixed[0][0]	(None, 12, 12, 1088)	418880	block17_3_mixed[0][0]
block17_3 (Lambda) _ac[0][0]	(None, 12, 12, 1088)	0	block17_2_ac[0][0]
_conv[0][0]			block17_3_conv[0][0]
block17_3_ac (Activation) [0][0]	(None, 12, 12, 1088)	0	block17_3_conv[0][0]
conv2d_89 (Conv2D) _ac[0][0]	(None, 12, 12, 128)	139264	block17_3_ac[0][0]
batch_normalization_89 (Batch Normalization) [0][0]	(None, 12, 12, 128)	384	conv2d_89_ac[0][0]
activation_89 (Activation) malization_89[0][0]	(None, 12, 12, 128)	0	batch_normalization_89[0][0]
conv2d_90 (Conv2D) n_89[0][0]	(None, 12, 12, 160)	143360	activation_89[0][0]
batch_normalization_90 (Batch Normalization) [0][0]	(None, 12, 12, 160)	480	conv2d_90_n_89[0][0]

activation_90 (Activation) malization_90[0][0]	(None, 12, 12, 160) 0	batch_nor
conv2d_88 (Conv2D) _ac[0][0]	(None, 12, 12, 192) 208896	block17_3
conv2d_91 (Conv2D) n_90[0][0]	(None, 12, 12, 192) 215040	activatio
batch_normalization_88 (BatchNo [0][0]	(None, 12, 12, 192) 576	conv2d_88
batch_normalization_91 (BatchNo [0][0]	(None, 12, 12, 192) 576	conv2d_91
activation_88 (Activation) malization_88[0][0]	(None, 12, 12, 192) 0	batch_nor
activation_91 (Activation) malization_91[0][0]	(None, 12, 12, 192) 0	batch_nor
block17_4_mixed (Concatenate) n_88[0][0]	(None, 12, 12, 384) 0	activatio
n_91[0][0]		activatio
block17_4_conv (Conv2D) _mixed[0][0]	(None, 12, 12, 1088) 418880	block17_4
block17_4 (Lambda) _ac[0][0]	(None, 12, 12, 1088) 0	block17_3
_conv[0][0]		block17_4
block17_4_ac (Activation) [0][0]	(None, 12, 12, 1088) 0	block17_4
conv2d_93 (Conv2D) _ac[0][0]	(None, 12, 12, 128) 139264	block17_4
batch_normalization_93 (BatchNo [0][0]	(None, 12, 12, 128) 384	conv2d_93
activation_93 (Activation) malization_93[0][0]	(None, 12, 12, 128) 0	batch_nor

conv2d_94 (Conv2D) n_93[0][0]	(None, 12, 12, 160)	143360	activation_93[0][0]
batch_normalization_94 (Batch Normalization) [0][0]	(None, 12, 12, 160)	480	conv2d_94
activation_94 (Activation) malization_94[0][0]	(None, 12, 12, 160)	0	batch_normalization_94[0][0]
conv2d_92 (Conv2D) _ac[0][0]	(None, 12, 12, 192)	208896	block17_4
conv2d_95 (Conv2D) n_94[0][0]	(None, 12, 12, 192)	215040	activation_94[0][0]
batch_normalization_92 (Batch Normalization) [0][0]	(None, 12, 12, 192)	576	conv2d_92
batch_normalization_95 (Batch Normalization) [0][0]	(None, 12, 12, 192)	576	conv2d_95
activation_92 (Activation) malization_92[0][0]	(None, 12, 12, 192)	0	batch_normalization_92[0][0]
activation_95 (Activation) malization_95[0][0]	(None, 12, 12, 192)	0	batch_normalization_95[0][0]
block17_5_mixed (Concatenate) n_92[0][0]	(None, 12, 12, 384)	0	activation_92[0][0]
n_95[0][0]			activation_95[0][0]
block17_5_conv (Conv2D) _mixed[0][0]	(None, 12, 12, 1088)	418880	block17_5
block17_5 (Lambda) _ac[0][0]	(None, 12, 12, 1088)	0	block17_4
_conv[0][0]			block17_5
block17_5_ac (Activation) [0][0]	(None, 12, 12, 1088)	0	block17_5
conv2d_97 (Conv2D) _ac[0][0]	(None, 12, 12, 128)	139264	block17_5
batch_normalization_97 (Batch Normalization)	(None, 12, 12, 128)	384	conv2d_97

[0][0]

activation_97 (Activation) malization_97[0][0]	(None, 12, 12, 128) 0	batch_nor
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conv2d_98 (Conv2D) n_97[0][0]	(None, 12, 12, 160) 143360	activatio
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batch_normalization_98 (BatchNo [0][0])	(None, 12, 12, 160) 480	conv2d_98
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activation_98 (Activation) malization_98[0][0]	(None, 12, 12, 160) 0	batch_nor
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conv2d_96 (Conv2D) _ac[0][0]	(None, 12, 12, 192) 208896	block17_5
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conv2d_99 (Conv2D) n_98[0][0]	(None, 12, 12, 192) 215040	activatio
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batch_normalization_96 (BatchNo [0][0])	(None, 12, 12, 192) 576	conv2d_96
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batch_normalization_99 (BatchNo [0][0])	(None, 12, 12, 192) 576	conv2d_99
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activation_96 (Activation) malization_96[0][0]	(None, 12, 12, 192) 0	batch_nor
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activation_99 (Activation) malization_99[0][0]	(None, 12, 12, 192) 0	batch_nor
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block17_6_mixed (Concatenate) n_96[0][0]	(None, 12, 12, 384) 0	activatio
n_99[0][0]		activatio

block17_6_conv (Conv2D) _mixed[0][0]	(None, 12, 12, 1088) 418880	block17_6
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block17_6 (Lambda) _ac[0][0]	(None, 12, 12, 1088) 0	block17_5
_conv[0][0]		block17_6

block17_6_ac (Activation) [0][0]	(None, 12, 12, 1088) 0	block17_6
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conv2d_101 (Conv2D) _ac[0][0]	(None, 12, 12, 128)	139264	block17_6
batch_normalization_101 (Batch Normalization) 1[0][0]	(None, 12, 12, 128)	384	conv2d_101[0][0]
activation_101 (Activation) malization_101[0][0]	(None, 12, 12, 128)	0	batch_normalization_101[0][0]
conv2d_102 (Conv2D) n_101[0][0]	(None, 12, 12, 160)	143360	activation_101[0][0]
batch_normalization_102 (Batch Normalization) 2[0][0]	(None, 12, 12, 160)	480	conv2d_102[0][0]
activation_102 (Activation) malization_102[0][0]	(None, 12, 12, 160)	0	batch_normalization_102[0][0]
conv2d_100 (Conv2D) _ac[0][0]	(None, 12, 12, 192)	208896	block17_6
conv2d_103 (Conv2D) n_102[0][0]	(None, 12, 12, 192)	215040	activation_102[0][0]
batch_normalization_100 (Batch Normalization) 0[0][0]	(None, 12, 12, 192)	576	conv2d_100[0][0]
batch_normalization_103 (Batch Normalization) 3[0][0]	(None, 12, 12, 192)	576	conv2d_103[0][0]
activation_100 (Activation) malization_100[0][0]	(None, 12, 12, 192)	0	batch_normalization_100[0][0]
activation_103 (Activation) malization_103[0][0]	(None, 12, 12, 192)	0	batch_normalization_103[0][0]
block17_7_mixed (Concatenate) n_100[0][0]	(None, 12, 12, 384)	0	activation_100[0][0]
n_103[0][0]			activation_103[0][0]
block17_7_conv (Conv2D) _mixed[0][0]	(None, 12, 12, 1088)	418880	block17_7
block17_7 (Lambda)	(None, 12, 12, 1088)	0	block17_6

<u>_ac[0][0]</u>			block17_7
<u>_conv[0][0]</u>			
block17_7_ac (Activation) [0][0]	(None, 12, 12, 1088) 0		block17_7
conv2d_105 (Conv2D) _ac[0][0]	(None, 12, 12, 128) 139264		block17_7
batch_normalization_105 (BatchN 5[0][0]	(None, 12, 12, 128) 384		conv2d_10
activation_105 (Activation) malization_105[0][0]	(None, 12, 12, 128) 0		batch_nor
conv2d_106 (Conv2D) n_105[0][0]	(None, 12, 12, 160) 143360		activatio
batch_normalization_106 (BatchN 6[0][0]	(None, 12, 12, 160) 480		conv2d_10
activation_106 (Activation) malization_106[0][0]	(None, 12, 12, 160) 0		batch_nor
conv2d_104 (Conv2D) _ac[0][0]	(None, 12, 12, 192) 208896		block17_7
conv2d_107 (Conv2D) n_106[0][0]	(None, 12, 12, 192) 215040		activatio
batch_normalization_104 (BatchN 4[0][0]	(None, 12, 12, 192) 576		conv2d_10
batch_normalization_107 (BatchN 7[0][0]	(None, 12, 12, 192) 576		conv2d_10
activation_104 (Activation) malization_104[0][0]	(None, 12, 12, 192) 0		batch_nor
activation_107 (Activation) malization_107[0][0]	(None, 12, 12, 192) 0		batch_nor
block17_8_mixed (Concatenate) n_104[0][0]	(None, 12, 12, 384) 0		activatio
n_107[0][0]			activatio

block17_8_conv (Conv2D) _mixed[0][0]	(None, 12, 12, 1088) 418880	block17_8
block17_8 (Lambda) _ac[0][0]	(None, 12, 12, 1088) 0	block17_7
		block17_8
block17_8_conv[0][0]		
block17_8_ac (Activation) [0][0]	(None, 12, 12, 1088) 0	block17_8
conv2d_109 (Conv2D) _ac[0][0]	(None, 12, 12, 128) 139264	block17_8
batch_normalization_109 (BatchN 9[0][0]	(None, 12, 12, 128) 384	conv2d_10
activation_109 (Activation) malization_109[0][0]	(None, 12, 12, 128) 0	batch_nor
conv2d_110 (Conv2D) n_109[0][0]	(None, 12, 12, 160) 143360	activatio
batch_normalization_110 (BatchN 0[0][0]	(None, 12, 12, 160) 480	conv2d_11
activation_110 (Activation) malization_110[0][0]	(None, 12, 12, 160) 0	batch_nor
conv2d_108 (Conv2D) _ac[0][0]	(None, 12, 12, 192) 208896	block17_8
conv2d_111 (Conv2D) n_110[0][0]	(None, 12, 12, 192) 215040	activatio
batch_normalization_108 (BatchN 8[0][0]	(None, 12, 12, 192) 576	conv2d_10
batch_normalization_111 (BatchN 1[0][0]	(None, 12, 12, 192) 576	conv2d_11
activation_108 (Activation) malization_108[0][0]	(None, 12, 12, 192) 0	batch_nor
activation_111 (Activation)	(None, 12, 12, 192) 0	batch_nor

malization_111[0][0]

block17_9_mixed (Concatenate)	(None, 12, 12, 384)	0	activation_108[0][0]
n_111[0][0]			activation_111[0][0]

block17_9_conv (Conv2D)	(None, 12, 12, 1088)	418880	block17_9_mixed[0][0]
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block17_9 (Lambda)	(None, 12, 12, 1088)	0	block17_9_ac[0][0]
_conv[0][0]			block17_9_conv[0][0]

block17_9_ac (Activation)	(None, 12, 12, 1088)	0	block17_9_ac[0][0]
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conv2d_113 (Conv2D)	(None, 12, 12, 128)	139264	conv2d_113_ac[0][0]
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batch_normalization_113 (Batch Normalization)	(None, 12, 12, 128)	384	conv2d_113[0][0]
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activation_113 (Activation)	(None, 12, 12, 128)	0	batch_normalization_113[0][0]
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conv2d_114 (Conv2D)	(None, 12, 12, 160)	143360	conv2d_114[0][0]
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batch_normalization_114 (Batch Normalization)	(None, 12, 12, 160)	480	conv2d_114[0][0]
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activation_114 (Activation)	(None, 12, 12, 160)	0	batch_normalization_114[0][0]
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conv2d_112 (Conv2D)	(None, 12, 12, 192)	208896	conv2d_112_ac[0][0]
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conv2d_115 (Conv2D)	(None, 12, 12, 192)	215040	conv2d_115[0][0]
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batch_normalization_112 (Batch Normalization)	(None, 12, 12, 192)	576	conv2d_112[0][0]
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batch_normalization_115 (Batch Normalization)	(None, 12, 12, 192)	576	conv2d_115[0][0]
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activation_112 (Activation) malization_112[0][0]	(None, 12, 12, 192) 0	batch_nor
activation_115 (Activation) malization_115[0][0]	(None, 12, 12, 192) 0	batch_nor
block17_10_mixed (Concatenate) n_112[0][0]	(None, 12, 12, 384) 0	activatio
n_115[0][0]		activatio
block17_10_conv (Conv2D) 0_mixed[0][0]	(None, 12, 12, 1088) 418880	block17_1
block17_10 (Lambda) _ac[0][0]	(None, 12, 12, 1088) 0	block17_9
0_conv[0][0]		block17_1
block17_10_ac (Activation) 0[0][0]	(None, 12, 12, 1088) 0	block17_1
conv2d_117 (Conv2D) 0_ac[0][0]	(None, 12, 12, 128) 139264	block17_1
batch_normalization_117 (BatchN 7[0][0]	(None, 12, 12, 128) 384	conv2d_11
activation_117 (Activation) malization_117[0][0]	(None, 12, 12, 128) 0	batch_nor
conv2d_118 (Conv2D) n_117[0][0]	(None, 12, 12, 160) 143360	activatio
batch_normalization_118 (BatchN 8[0][0]	(None, 12, 12, 160) 480	conv2d_11
activation_118 (Activation) malization_118[0][0]	(None, 12, 12, 160) 0	batch_nor
conv2d_116 (Conv2D) 0_ac[0][0]	(None, 12, 12, 192) 208896	block17_1
conv2d_119 (Conv2D) n_118[0][0]	(None, 12, 12, 192) 215040	activatio

batch_normalization_116 (BatchN	(None, 12, 12, 192)	576	conv2d_11
6[0][0]			
batch_normalization_119 (BatchN	(None, 12, 12, 192)	576	conv2d_11
9[0][0]			
activation_116 (Activation)	(None, 12, 12, 192)	0	batch_nor
malization_116[0][0]			
activation_119 (Activation)	(None, 12, 12, 192)	0	batch_nor
malization_119[0][0]			
block17_11_mixed (Concatenate)	(None, 12, 12, 384)	0	activatio
n_116[0][0]			activatio
n_119[0][0]			
block17_11_conv (Conv2D)	(None, 12, 12, 1088)	418880	block17_1
1_mixed[0][0]			
block17_11 (Lambda)	(None, 12, 12, 1088)	0	block17_1
0_ac[0][0]			block17_1
1_conv[0][0]			
block17_11_ac (Activation)	(None, 12, 12, 1088)	0	block17_1
1[0][0]			
conv2d_121 (Conv2D)	(None, 12, 12, 128)	139264	block17_1
1_ac[0][0]			
batch_normalization_121 (BatchN	(None, 12, 12, 128)	384	conv2d_12
1[0][0]			
activation_121 (Activation)	(None, 12, 12, 128)	0	batch_nor
malization_121[0][0]			
conv2d_122 (Conv2D)	(None, 12, 12, 160)	143360	activatio
n_121[0][0]			
batch_normalization_122 (BatchN	(None, 12, 12, 160)	480	conv2d_12
2[0][0]			
activation_122 (Activation)	(None, 12, 12, 160)	0	batch_nor
malization_122[0][0]			

conv2d_120 (Conv2D) 1_ac[0][0]	(None, 12, 12, 192)	208896	block17_1
conv2d_123 (Conv2D) n_122[0][0]	(None, 12, 12, 192)	215040	activation_122[0][0]
batch_normalization_120 (Batch Normalization) 0[0][0]	(None, 12, 12, 192)	576	conv2d_120[0][0]
batch_normalization_123 (Batch Normalization) 3[0][0]	(None, 12, 12, 192)	576	conv2d_123[0][0]
activation_120 (Activation) malization_120[0][0]	(None, 12, 12, 192)	0	batch_normalization_120[0][0]
activation_123 (Activation) malization_123[0][0]	(None, 12, 12, 192)	0	batch_normalization_123[0][0]
block17_12_mixed (Concatenate) n_120[0][0]	(None, 12, 12, 384)	0	activation_120[0][0]
			activation_123[0][0]
block17_12_conv (Conv2D) 2_mixed[0][0]	(None, 12, 12, 1088)	418880	block17_12_mixed[0][0]
block17_12 (Lambda) 1_ac[0][0]	(None, 12, 12, 1088)	0	block17_12_conv[0][0]
			block17_12_mixed[0][0]
block17_12_ac (Activation) 2[0][0]	(None, 12, 12, 1088)	0	block17_12_conv[0][0]
conv2d_125 (Conv2D) 2_ac[0][0]	(None, 12, 12, 128)	139264	block17_12_ac[0][0]
batch_normalization_125 (Batch Normalization) 5[0][0]	(None, 12, 12, 128)	384	conv2d_125[0][0]
activation_125 (Activation) malization_125[0][0]	(None, 12, 12, 128)	0	batch_normalization_125[0][0]
conv2d_126 (Conv2D) n_125[0][0]	(None, 12, 12, 160)	143360	activation_125[0][0]
batch_normalization_126 (Batch Normalization)	(None, 12, 12, 160)	480	conv2d_126[0][0]

6[0][0]

activation_126 (Activation) malization_126[0][0]	(None, 12, 12, 160) 0	batch_nor
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conv2d_124 (Conv2D) 2_ac[0][0]	(None, 12, 12, 192) 208896	block17_1
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conv2d_127 (Conv2D) n_126[0][0]	(None, 12, 12, 192) 215040	activatio
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batch_normalization_124 (BatchN 4[0][0]	(None, 12, 12, 192) 576	conv2d_12
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batch_normalization_127 (BatchN 7[0][0]	(None, 12, 12, 192) 576	conv2d_12
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activation_124 (Activation) malization_124[0][0]	(None, 12, 12, 192) 0	batch_nor
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activation_127 (Activation) malization_127[0][0]	(None, 12, 12, 192) 0	batch_nor
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block17_13_mixed (Concatenate) n_124[0][0]	(None, 12, 12, 384) 0	activatio
n_127[0][0]		activatio

block17_13_conv (Conv2D) 3_mixed[0][0]	(None, 12, 12, 1088) 418880	block17_1
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block17_13 (Lambda) 2_ac[0][0]	(None, 12, 12, 1088) 0	block17_1
3_conv[0][0]		block17_1

block17_13_ac (Activation) 3[0][0]	(None, 12, 12, 1088) 0	block17_1
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conv2d_129 (Conv2D) 3_ac[0][0]	(None, 12, 12, 128) 139264	block17_1
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batch_normalization_129 (BatchN 9[0][0]	(None, 12, 12, 128) 384	conv2d_12
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activation_129 (Activation) malization_129[0][0]	(None, 12, 12, 128) 0	batch_nor
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conv2d_130 (Conv2D) n_129[0][0]	(None, 12, 12, 160)	143360	activation_130[0][0]
batch_normalization_130 (Batch Normalization) 0[0][0]	(None, 12, 12, 160)	480	conv2d_130[0][0]
activation_130 (Activation) malization_130[0][0]	(None, 12, 12, 160)	0	batch_normalization_130[0][0]
conv2d_128 (Conv2D) 3_ac[0][0]	(None, 12, 12, 192)	208896	block17_13_ac[0][0]
conv2d_131 (Conv2D) n_130[0][0]	(None, 12, 12, 192)	215040	activation_131[0][0]
batch_normalization_128 (Batch Normalization) 8[0][0]	(None, 12, 12, 192)	576	conv2d_128[0][0]
batch_normalization_131 (Batch Normalization) 1[0][0]	(None, 12, 12, 192)	576	conv2d_131[0][0]
activation_128 (Activation) malization_128[0][0]	(None, 12, 12, 192)	0	batch_normalization_128[0][0]
activation_131 (Activation) malization_131[0][0]	(None, 12, 12, 192)	0	batch_normalization_131[0][0]
block17_14_mixed (Concatenate) n_128[0][0]	(None, 12, 12, 384)	0	activation_128[0][0]
n_131[0][0]			activation_131[0][0]
block17_14_conv (Conv2D) 4_mixed[0][0]	(None, 12, 12, 1088)	418880	block17_14_mixed[0][0]
block17_14 (Lambda) 3_ac[0][0]	(None, 12, 12, 1088)	0	block17_14_conv[0][0]
4_conv[0][0]			block17_14[0][0]
block17_14_ac (Activation) 4[0][0]	(None, 12, 12, 1088)	0	block17_14_conv[0][0]
conv2d_133 (Conv2D) 4_ac[0][0]	(None, 12, 12, 128)	139264	block17_14_ac[0][0]

batch_normalization_133 (Batch Normalization)	(None, 12, 12, 128)	384	conv2d_133[0][0]
activation_133 (Activation)	(None, 12, 12, 128)	0	batch_normalization_133[0][0]
conv2d_134 (Conv2D)	(None, 12, 12, 160)	143360	activation_133[0][0]
batch_normalization_134 (Batch Normalization)	(None, 12, 12, 160)	480	conv2d_134[0][0]
activation_134 (Activation)	(None, 12, 12, 160)	0	batch_normalization_134[0][0]
conv2d_132 (Conv2D)	(None, 12, 12, 192)	208896	block17_14_ac[0][0]
conv2d_135 (Conv2D)	(None, 12, 12, 192)	215040	activation_132[0][0]
batch_normalization_132 (Batch Normalization)	(None, 12, 12, 192)	576	conv2d_135[0][0]
batch_normalization_135 (Batch Normalization)	(None, 12, 12, 192)	576	conv2d_132[0][0]
activation_132 (Activation)	(None, 12, 12, 192)	0	batch_normalization_135[0][0]
activation_135 (Activation)	(None, 12, 12, 192)	0	batch_normalization_132[0][0]
block17_15_mixed (Concatenate)	(None, 12, 12, 384)	0	activation_135[0][0]
block17_15_conv (Conv2D)	(None, 12, 12, 1088)	418880	activation_132[0][0]
block17_15 (Lambda)	(None, 12, 12, 1088)	0	block17_15_mixed[0][0]
block17_15_conv (Conv2D)	(None, 12, 12, 1088)	0	block17_15_conv[0][0]

block17_15_ac (Activation) 5[0][0]	(None, 12, 12, 1088) 0	block17_1
conv2d_137 (Conv2D) 5_ac[0][0]	(None, 12, 12, 128) 139264	block17_1
batch_normalization_137 (BatchN 7[0][0]	(None, 12, 12, 128) 384	conv2d_13
activation_137 (Activation) malization_137[0][0]	(None, 12, 12, 128) 0	batch_nor
conv2d_138 (Conv2D) n_137[0][0]	(None, 12, 12, 160) 143360	activatio
batch_normalization_138 (BatchN 8[0][0]	(None, 12, 12, 160) 480	conv2d_13
activation_138 (Activation) malization_138[0][0]	(None, 12, 12, 160) 0	batch_nor
conv2d_136 (Conv2D) 5_ac[0][0]	(None, 12, 12, 192) 208896	block17_1
conv2d_139 (Conv2D) n_138[0][0]	(None, 12, 12, 192) 215040	activatio
batch_normalization_136 (BatchN 6[0][0]	(None, 12, 12, 192) 576	conv2d_13
batch_normalization_139 (BatchN 9[0][0]	(None, 12, 12, 192) 576	conv2d_13
activation_136 (Activation) malization_136[0][0]	(None, 12, 12, 192) 0	batch_nor
activation_139 (Activation) malization_139[0][0]	(None, 12, 12, 192) 0	batch_nor
block17_16_mixed (Concatenate) n_136[0][0]	(None, 12, 12, 384) 0	activatio
n_139[0][0]		activatio
block17_16_conv (Conv2D) 6_mixed[0][0]	(None, 12, 12, 1088) 418880	block17_1

block17_16 (Lambda) 5_ac[0][0]	(None, 12, 12, 1088) 0	block17_1 block17_1
6_conv[0][0]		
block17_16_ac (Activation) 6[0][0]	(None, 12, 12, 1088) 0	block17_1
conv2d_141 (Conv2D) 6_ac[0][0]	(None, 12, 12, 128) 139264	block17_1
batch_normalization_141 (BatchN 1[0][0]	(None, 12, 12, 128) 384	conv2d_14
activation_141 (Activation) malization_141[0][0]	(None, 12, 12, 128) 0	batch_nor
conv2d_142 (Conv2D) n_141[0][0]	(None, 12, 12, 160) 143360	activatio
batch_normalization_142 (BatchN 2[0][0]	(None, 12, 12, 160) 480	conv2d_14
activation_142 (Activation) malization_142[0][0]	(None, 12, 12, 160) 0	batch_nor
conv2d_140 (Conv2D) 6_ac[0][0]	(None, 12, 12, 192) 208896	block17_1
conv2d_143 (Conv2D) n_142[0][0]	(None, 12, 12, 192) 215040	activatio
batch_normalization_140 (BatchN 0[0][0]	(None, 12, 12, 192) 576	conv2d_14
batch_normalization_143 (BatchN 3[0][0]	(None, 12, 12, 192) 576	conv2d_14
activation_140 (Activation) malization_140[0][0]	(None, 12, 12, 192) 0	batch_nor
activation_143 (Activation) malization_143[0][0]	(None, 12, 12, 192) 0	batch_nor
block17_17_mixed (Concatenate) n_140[0][0]	(None, 12, 12, 384) 0	activatio

activatio

n_143[0][0]

block17_17_conv (Conv2D) 7_mixed[0][0]	(None, 12, 12, 1088) 418880	block17_1
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block17_17 (Lambda) 6_ac[0][0]	(None, 12, 12, 1088) 0	block17_1
7_conv[0][0]		block17_1

block17_17_ac (Activation) 7[0][0]	(None, 12, 12, 1088) 0	block17_1
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conv2d_145 (Conv2D) 7_ac[0][0]	(None, 12, 12, 128) 139264	block17_1
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batch_normalization_145 (BatchN 5[0][0])	(None, 12, 12, 128) 384	conv2d_14
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activation_145 (Activation) malization_145[0][0]	(None, 12, 12, 128) 0	batch_nor
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conv2d_146 (Conv2D) n_145[0][0]	(None, 12, 12, 160) 143360	activatio
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batch_normalization_146 (BatchN 6[0][0])	(None, 12, 12, 160) 480	conv2d_14
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activation_146 (Activation) malization_146[0][0]	(None, 12, 12, 160) 0	batch_nor
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conv2d_144 (Conv2D) 7_ac[0][0]	(None, 12, 12, 192) 208896	block17_1
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conv2d_147 (Conv2D) n_146[0][0]	(None, 12, 12, 192) 215040	activatio
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batch_normalization_144 (BatchN 4[0][0])	(None, 12, 12, 192) 576	conv2d_14
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batch_normalization_147 (BatchN 7[0][0])	(None, 12, 12, 192) 576	conv2d_14
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activation_144 (Activation) malization_144[0][0]	(None, 12, 12, 192) 0	batch_nor
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activation_147 (Activation) malization_147[0][0]	(None, 12, 12, 192) 0	batch_nor
block17_18_mixed (Concatenate) n_144[0][0]	(None, 12, 12, 384) 0	activatio
n_147[0][0]		activatio
block17_18_conv (Conv2D) 8_mixed[0][0]	(None, 12, 12, 1088) 418880	block17_1
block17_18 (Lambda) 7_ac[0][0]	(None, 12, 12, 1088) 0	block17_1
8_conv[0][0]		block17_1
block17_18_ac (Activation) 8[0][0]	(None, 12, 12, 1088) 0	block17_1
conv2d_149 (Conv2D) 8_ac[0][0]	(None, 12, 12, 128) 139264	block17_1
batch_normalization_149 (BatchN 9[0][0]	(None, 12, 12, 128) 384	conv2d_14
activation_149 (Activation) malization_149[0][0]	(None, 12, 12, 128) 0	batch_nor
conv2d_150 (Conv2D) n_149[0][0]	(None, 12, 12, 160) 143360	activatio
batch_normalization_150 (BatchN 0[0][0]	(None, 12, 12, 160) 480	conv2d_15
activation_150 (Activation) malization_150[0][0]	(None, 12, 12, 160) 0	batch_nor
conv2d_148 (Conv2D) 8_ac[0][0]	(None, 12, 12, 192) 208896	block17_1
conv2d_151 (Conv2D) n_150[0][0]	(None, 12, 12, 192) 215040	activatio
batch_normalization_148 (BatchN 8[0][0]	(None, 12, 12, 192) 576	conv2d_14

batch_normalization_151 (BatchN	(None, 12, 12, 192)	576	conv2d_151[0][0]
activation_148 (Activation)	(None, 12, 12, 192)	0	batch_normalization_148[0][0]
activation_151 (Activation)	(None, 12, 12, 192)	0	batch_normalization_151[0][0]
block17_19_mixed (Concatenate)	(None, 12, 12, 384)	0	activation_148[0][0]
			activation_151[0][0]
block17_19_conv (Conv2D)	(None, 12, 12, 1088)	418880	block17_19_mixed[0][0]
block17_19 (Lambda)	(None, 12, 12, 1088)	0	block17_19_conv[0][0]
			block17_19_conv[0][0]
block17_19_ac (Activation)	(None, 12, 12, 1088)	0	block17_19_conv[0][0]
conv2d_153 (Conv2D)	(None, 12, 12, 128)	139264	block17_19_ac[0][0]
batch_normalization_153 (BatchN	(None, 12, 12, 128)	384	conv2d_153[0][0]
activation_153 (Activation)	(None, 12, 12, 128)	0	batch_normalization_153[0][0]
conv2d_154 (Conv2D)	(None, 12, 12, 160)	143360	activation_153[0][0]
batch_normalization_154 (BatchN	(None, 12, 12, 160)	480	conv2d_154[0][0]
activation_154 (Activation)	(None, 12, 12, 160)	0	batch_normalization_154[0][0]
conv2d_152 (Conv2D)	(None, 12, 12, 192)	208896	conv2d_154[0][0]
conv2d_155 (Conv2D)	(None, 12, 12, 192)	215040	conv2d_152[0][0]

n_154[0][0]

batch_normalization_152 (BatchN	(None, 12, 12, 192)	576	conv2d_15
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2[0][0]			
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batch_normalization_155 (BatchN	(None, 12, 12, 192)	576	conv2d_15
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5[0][0]			
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activation_152 (Activation)	(None, 12, 12, 192)	0	batch_nor
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malization_152[0][0]			
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activation_155 (Activation)	(None, 12, 12, 192)	0	batch_nor
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malization_155[0][0]			
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block17_20_mixed (Concatenate)	(None, 12, 12, 384)	0	activatio
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n_155[0][0]

n_152[0][0]			
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block17_20_conv (Conv2D)	(None, 12, 12, 1088)	418880	block17_2
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0_mixed[0][0]			
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block17_20 (Lambda)	(None, 12, 12, 1088)	0	block17_1
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0_conv[0][0]

9_ac[0][0]			
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block17_20_ac (Activation)	(None, 12, 12, 1088)	0	block17_2
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0[0][0]			
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conv2d_160 (Conv2D)	(None, 12, 12, 256)	278528	block17_2
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0_ac[0][0]			
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batch_normalization_160 (BatchN	(None, 12, 12, 256)	768	conv2d_16
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0[0][0]			
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activation_160 (Activation)	(None, 12, 12, 256)	0	batch_nor
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malization_160[0][0]			
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conv2d_156 (Conv2D)	(None, 12, 12, 256)	278528	block17_2
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0_ac[0][0]			
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conv2d_158 (Conv2D)	(None, 12, 12, 256)	278528	block17_2
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0[0][0]			
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conv2d_161 (Conv2D)	(None, 12, 12, 288)	663552	activatio
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n_160[0][0]

batch_normalization_156 (BatchN	(None, 12, 12, 256)	768	conv2d_15
6[0][0]			
batch_normalization_158 (BatchN	(None, 12, 12, 256)	768	conv2d_15
8[0][0]			
batch_normalization_161 (BatchN	(None, 12, 12, 288)	864	conv2d_16
1[0][0]			
activation_156 (Activation)	(None, 12, 12, 256)	0	batch_nor
malization_156[0][0]			
activation_158 (Activation)	(None, 12, 12, 256)	0	batch_nor
malization_158[0][0]			
activation_161 (Activation)	(None, 12, 12, 288)	0	batch_nor
malization_161[0][0]			
conv2d_157 (Conv2D)	(None, 5, 5, 384)	884736	activatio
n_156[0][0]			
conv2d_159 (Conv2D)	(None, 5, 5, 288)	663552	activatio
n_158[0][0]			
conv2d_162 (Conv2D)	(None, 5, 5, 320)	829440	activatio
n_161[0][0]			
batch_normalization_157 (BatchN	(None, 5, 5, 384)	1152	conv2d_15
7[0][0]			
batch_normalization_159 (BatchN	(None, 5, 5, 288)	864	conv2d_15
9[0][0]			
batch_normalization_162 (BatchN	(None, 5, 5, 320)	960	conv2d_16
2[0][0]			
activation_157 (Activation)	(None, 5, 5, 384)	0	batch_nor
malization_157[0][0]			
activation_159 (Activation)	(None, 5, 5, 288)	0	batch_nor
malization_159[0][0]			
activation_162 (Activation)	(None, 5, 5, 320)	0	batch_nor
malization_162[0][0]			

max_pooling2d_3 (MaxPooling2D)	(None, 5, 5, 1088)	0	block17_2
0_ac[0][0]			
mixed_7a (Concatenate)	(None, 5, 5, 2080)	0	activation_157[0][0]
n_157[0][0]			activation_159[0][0]
n_159[0][0]			activation_162[0][0]
n_162[0][0]			max_pooling2d_3[0][0]
conv2d_164 (Conv2D)	(None, 5, 5, 192)	399360	mixed_7a
[0][0]			
batch_normalization_164 (Batch Normalization)	(None, 5, 5, 192)	576	conv2d_164[0][0]
4[0][0]			
activation_164 (Activation)	(None, 5, 5, 192)	0	batch_normalization_164[0][0]
malization_164[0][0]			
conv2d_165 (Conv2D)	(None, 5, 5, 224)	129024	activation_164[0][0]
n_164[0][0]			
batch_normalization_165 (Batch Normalization)	(None, 5, 5, 224)	672	conv2d_165[0][0]
5[0][0]			
activation_165 (Activation)	(None, 5, 5, 224)	0	batch_normalization_165[0][0]
malization_165[0][0]			
conv2d_163 (Conv2D)	(None, 5, 5, 192)	399360	mixed_7a
[0][0]			
conv2d_166 (Conv2D)	(None, 5, 5, 256)	172032	activation_163[0][0]
n_165[0][0]			
batch_normalization_163 (Batch Normalization)	(None, 5, 5, 192)	576	conv2d_163[0][0]
3[0][0]			
batch_normalization_166 (Batch Normalization)	(None, 5, 5, 256)	768	conv2d_166[0][0]
6[0][0]			
activation_163 (Activation)	(None, 5, 5, 192)	0	batch_normalization_163[0][0]
malization_163[0][0]			
activation_166 (Activation)	(None, 5, 5, 256)	0	batch_normalization_166[0][0]
malization_166[0][0]			

block8_1_mixed (Concatenate) n_163[0][0]	(None, 5, 5, 448)	0	activation_163[0][0]
block8_1_conv (Conv2D) mixed[0][0]	(None, 5, 5, 2080)	933920	block8_1_mixed[0][0]
block8_1 (Lambda) [0][0]	(None, 5, 5, 2080)	0	mixed_7a_block8_1_conv[0][0]
block8_1_ac (Activation) [0][0]	(None, 5, 5, 2080)	0	block8_1_mixed[0][0]
conv2d_168 (Conv2D) ac[0][0]	(None, 5, 5, 192)	399360	block8_1_activation[0][0]
batch_normalization_168 (Batch Normalization) 8[0][0]	(None, 5, 5, 192)	576	conv2d_168[0][0]
activation_168 (Activation) malization_168[0][0]	(None, 5, 5, 192)	0	batch_normalization_168[0][0]
conv2d_169 (Conv2D) n_168[0][0]	(None, 5, 5, 224)	129024	activation_168[0][0]
batch_normalization_169 (Batch Normalization) 9[0][0]	(None, 5, 5, 224)	672	conv2d_169[0][0]
activation_169 (Activation) malization_169[0][0]	(None, 5, 5, 224)	0	batch_normalization_169[0][0]
conv2d_167 (Conv2D) ac[0][0]	(None, 5, 5, 192)	399360	block8_1_activation[0][0]
conv2d_170 (Conv2D) n_169[0][0]	(None, 5, 5, 256)	172032	activation_169[0][0]
batch_normalization_167 (Batch Normalization) 7[0][0]	(None, 5, 5, 192)	576	conv2d_170[0][0]
batch_normalization_170 (Batch Normalization) 0[0][0]	(None, 5, 5, 256)	768	conv2d_167[0][0]

activation_167 (Activation) malization_167[0][0]	(None, 5, 5, 192)	0	batch_nor
activation_170 (Activation) malization_170[0][0]	(None, 5, 5, 256)	0	batch_nor
block8_2_mixed (Concatenate) n_167[0][0]	(None, 5, 5, 448)	0	activatio
n_170[0][0]			activatio
block8_2_conv (Conv2D) mixed[0][0]	(None, 5, 5, 2080)	933920	block8_2_
block8_2 (Lambda) ac[0][0]	(None, 5, 5, 2080)	0	block8_1_
conv[0][0]			block8_2_
block8_2_ac (Activation) [0][0]	(None, 5, 5, 2080)	0	block8_2
conv2d_172 (Conv2D) ac[0][0]	(None, 5, 5, 192)	399360	block8_2_
batch_normalization_172 (BatchN 2[0][0]	(None, 5, 5, 192)	576	conv2d_17
activation_172 (Activation) malization_172[0][0]	(None, 5, 5, 192)	0	batch_nor
conv2d_173 (Conv2D) n_172[0][0]	(None, 5, 5, 224)	129024	activatio
batch_normalization_173 (BatchN 3[0][0]	(None, 5, 5, 224)	672	conv2d_17
activation_173 (Activation) malization_173[0][0]	(None, 5, 5, 224)	0	batch_nor
conv2d_171 (Conv2D) ac[0][0]	(None, 5, 5, 192)	399360	block8_2_
conv2d_174 (Conv2D) n_173[0][0]	(None, 5, 5, 256)	172032	activatio

batch_normalization_171 (BatchN	(None, 5, 5, 192)	576	conv2d_17
1[0][0]			
batch_normalization_174 (BatchN	(None, 5, 5, 256)	768	conv2d_17
4[0][0]			
activation_171 (Activation)	(None, 5, 5, 192)	0	batch_nor
malization_171[0][0]			
activation_174 (Activation)	(None, 5, 5, 256)	0	batch_nor
malization_174[0][0]			
block8_3_mixed (Concatenate)	(None, 5, 5, 448)	0	activatio
n_171[0][0]			activatio
n_174[0][0]			
block8_3_conv (Conv2D)	(None, 5, 5, 2080)	933920	block8_3_
mixed[0][0]			
block8_3 (Lambda)	(None, 5, 5, 2080)	0	block8_2_
ac[0][0]			block8_3_
conv[0][0]			
block8_3_ac (Activation)	(None, 5, 5, 2080)	0	block8_3
[0][0]			
conv2d_176 (Conv2D)	(None, 5, 5, 192)	399360	block8_3_
ac[0][0]			
batch_normalization_176 (BatchN	(None, 5, 5, 192)	576	conv2d_17
6[0][0]			
activation_176 (Activation)	(None, 5, 5, 192)	0	batch_nor
malization_176[0][0]			
conv2d_177 (Conv2D)	(None, 5, 5, 224)	129024	activatio
n_176[0][0]			
batch_normalization_177 (BatchN	(None, 5, 5, 224)	672	conv2d_17
7[0][0]			
activation_177 (Activation)	(None, 5, 5, 224)	0	batch_nor
malization_177[0][0]			
conv2d_175 (Conv2D)	(None, 5, 5, 192)	399360	block8_3_

ac[0][0]

conv2d_178 (Conv2D) n_177[0][0]	(None, 5, 5, 256)	172032	activation_177[0][0]
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batch_normalization_175 (Batch Normalization) 5[0][0]	(None, 5, 5, 192)	576	conv2d_175[0][0]
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batch_normalization_178 (Batch Normalization) 8[0][0]	(None, 5, 5, 256)	768	conv2d_178[0][0]
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activation_175 (Activation) malization_175[0][0]	(None, 5, 5, 192)	0	batch_normalization_175[0][0]
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activation_178 (Activation) malization_178[0][0]	(None, 5, 5, 256)	0	batch_normalization_178[0][0]
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block8_4_mixed (Concatenate) n_175[0][0]	(None, 5, 5, 448)	0	activation_175[0][0]
n_178[0][0]			activation_178[0][0]

block8_4_conv (Conv2D) mixed[0][0]	(None, 5, 5, 2080)	933920	block8_4_mixed[0][0]
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block8_4 (Lambda) ac[0][0]	(None, 5, 5, 2080)	0	block8_3_ac[0][0]
conv[0][0]			block8_4_conv[0][0]

block8_4_ac (Activation) [0][0]	(None, 5, 5, 2080)	0	block8_4_conv[0][0]
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conv2d_180 (Conv2D) ac[0][0]	(None, 5, 5, 192)	399360	block8_4_ac[0][0]
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batch_normalization_180 (Batch Normalization) 0[0][0]	(None, 5, 5, 192)	576	conv2d_180[0][0]
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activation_180 (Activation) malization_180[0][0]	(None, 5, 5, 192)	0	batch_normalization_180[0][0]
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conv2d_181 (Conv2D) n_180[0][0]	(None, 5, 5, 224)	129024	activation_180[0][0]
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batch_normalization_181 (Batch Normalization) 1[0][0]	(None, 5, 5, 224)	672	conv2d_181[0][0]
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activation_181 (Activation) malization_181[0][0]	(None, 5, 5, 224)	0	batch_nor
conv2d_179 (Conv2D) ac[0][0]	(None, 5, 5, 192)	399360	block8_4_
conv2d_182 (Conv2D) n_181[0][0]	(None, 5, 5, 256)	172032	activatio
batch_normalization_179 (BatchN 9[0][0]	(None, 5, 5, 192)	576	conv2d_17
batch_normalization_182 (BatchN 2[0][0]	(None, 5, 5, 256)	768	conv2d_18
activation_179 (Activation) malization_179[0][0]	(None, 5, 5, 192)	0	batch_nor
activation_182 (Activation) malization_182[0][0]	(None, 5, 5, 256)	0	batch_nor
block8_5_mixed (Concatenate) n_179[0][0] n_182[0][0]	(None, 5, 5, 448)	0	activatio activatio
block8_5_conv (Conv2D) mixed[0][0]	(None, 5, 5, 2080)	933920	block8_5_
block8_5 (Lambda) ac[0][0] conv[0][0]	(None, 5, 5, 2080)	0	block8_4_ block8_5_
block8_5_ac (Activation) [0][0]	(None, 5, 5, 2080)	0	block8_5
conv2d_184 (Conv2D) ac[0][0]	(None, 5, 5, 192)	399360	block8_5_
batch_normalization_184 (BatchN 4[0][0]	(None, 5, 5, 192)	576	conv2d_18
activation_184 (Activation) malization_184[0][0]	(None, 5, 5, 192)	0	batch_nor

conv2d_185 (Conv2D) n_184[0][0]	(None, 5, 5, 224)	129024	activation_185[0][0]
batch_normalization_185 (Batch Normalization)	(None, 5, 5, 224)	672	conv2d_185[0][0]
activation_185 (Activation) batch_normalization_185[0][0]	(None, 5, 5, 224)	0	batch_normalization_185[0][0]
conv2d_183 (Conv2D) ac[0][0]	(None, 5, 5, 192)	399360	block8_5_activation[0][0]
conv2d_186 (Conv2D) n_185[0][0]	(None, 5, 5, 256)	172032	activation_186[0][0]
batch_normalization_183 (Batch Normalization)	(None, 5, 5, 192)	576	conv2d_183[0][0]
batch_normalization_186 (Batch Normalization)	(None, 5, 5, 256)	768	conv2d_186[0][0]
activation_183 (Activation) batch_normalization_183[0][0]	(None, 5, 5, 192)	0	batch_normalization_183[0][0]
activation_186 (Activation) batch_normalization_186[0][0]	(None, 5, 5, 256)	0	batch_normalization_186[0][0]
block8_6_mixed (Concatenate) n_183[0][0] n_186[0][0]	(None, 5, 5, 448)	0	activation_183[0][0] activation_186[0][0]
block8_6_conv (Conv2D) mixed[0][0]	(None, 5, 5, 2080)	933920	block8_6_conv[0][0]
block8_6 (Lambda) ac[0][0] conv[0][0]	(None, 5, 5, 2080)	0	block8_5_activation[0][0] block8_6_conv[0][0]
block8_6_ac (Activation) [0][0]	(None, 5, 5, 2080)	0	block8_6_activation[0][0]
conv2d_188 (Conv2D) ac[0][0]	(None, 5, 5, 192)	399360	block8_6_activation[0][0]

batch_normalization_188 (BatchN	(None, 5, 5, 192)	576	conv2d_188[0][0]
activation_188 (Activation)	(None, 5, 5, 192)	0	batch_normalization_188[0][0]
conv2d_189 (Conv2D)	(None, 5, 5, 224)	129024	activation_188[0][0]
batch_normalization_189 (BatchN	(None, 5, 5, 224)	672	conv2d_189[0][0]
activation_189 (Activation)	(None, 5, 5, 224)	0	batch_normalization_189[0][0]
conv2d_187 (Conv2D)	(None, 5, 5, 192)	399360	block8_6_ac[0][0]
conv2d_190 (Conv2D)	(None, 5, 5, 256)	172032	activation_187[0][0]
batch_normalization_187 (BatchN	(None, 5, 5, 192)	576	conv2d_190[0][0]
batch_normalization_190 (BatchN	(None, 5, 5, 256)	768	conv2d_187[0][0]
activation_187 (Activation)	(None, 5, 5, 192)	0	conv2d_190[0][0]
activation_190 (Activation)	(None, 5, 5, 256)	0	activation_187[0][0]
block8_7_mixed (Concatenate)	(None, 5, 5, 448)	0	activation_190[0][0]
block8_7_conv (Conv2D)	(None, 5, 5, 2080)	933920	activation_187[0][0]
block8_7 (Lambda)	(None, 5, 5, 2080)	0	activation_190[0][0]
block8_7_ac (Activation)	(None, 5, 5, 2080)	0	block8_7_mixed[0][0]
			block8_7_conv[0][0]
			block8_7_ac[0][0]

[0][0]

conv2d_192 (Conv2D) ac[0][0]	(None, 5, 5, 192)	399360	block8_7_
batch_normalization_192 (BatchN 2[0][0]	(None, 5, 5, 192)	576	conv2d_19
activation_192 (Activation) malization_192[0][0]	(None, 5, 5, 192)	0	batch_nor
conv2d_193 (Conv2D) n_192[0][0]	(None, 5, 5, 224)	129024	activatio
batch_normalization_193 (BatchN 3[0][0]	(None, 5, 5, 224)	672	conv2d_19
activation_193 (Activation) malization_193[0][0]	(None, 5, 5, 224)	0	batch_nor
conv2d_191 (Conv2D) ac[0][0]	(None, 5, 5, 192)	399360	block8_7_
conv2d_194 (Conv2D) n_193[0][0]	(None, 5, 5, 256)	172032	activatio
batch_normalization_191 (BatchN 1[0][0]	(None, 5, 5, 192)	576	conv2d_19
batch_normalization_194 (BatchN 4[0][0]	(None, 5, 5, 256)	768	conv2d_19
activation_191 (Activation) malization_191[0][0]	(None, 5, 5, 192)	0	batch_nor
activation_194 (Activation) malization_194[0][0]	(None, 5, 5, 256)	0	batch_nor
block8_8_mixed (Concatenate) n_191[0][0]	(None, 5, 5, 448)	0	activatio
n_194[0][0]			activatio
block8_8_conv (Conv2D) mixed[0][0]	(None, 5, 5, 2080)	933920	block8_8_

block8_8 (Lambda) ac[0][0]	(None, 5, 5, 2080)	0	block8_7_ block8_8_ conv[0][0]
block8_8_ac (Activation) [0][0]	(None, 5, 5, 2080)	0	block8_8
conv2d_196 (Conv2D) ac[0][0]	(None, 5, 5, 192)	399360	block8_8_
batch_normalization_196 (BatchN 6[0][0]	(None, 5, 5, 192)	576	conv2d_19
activation_196 (Activation) malization_196[0][0]	(None, 5, 5, 192)	0	batch_nor
conv2d_197 (Conv2D) n_196[0][0]	(None, 5, 5, 224)	129024	activatio
batch_normalization_197 (BatchN 7[0][0]	(None, 5, 5, 224)	672	conv2d_19
activation_197 (Activation) malization_197[0][0]	(None, 5, 5, 224)	0	batch_nor
conv2d_195 (Conv2D) ac[0][0]	(None, 5, 5, 192)	399360	block8_8_
conv2d_198 (Conv2D) n_197[0][0]	(None, 5, 5, 256)	172032	activatio
batch_normalization_195 (BatchN 5[0][0]	(None, 5, 5, 192)	576	conv2d_19
batch_normalization_198 (BatchN 8[0][0]	(None, 5, 5, 256)	768	conv2d_19
activation_195 (Activation) malization_195[0][0]	(None, 5, 5, 192)	0	batch_nor
activation_198 (Activation) malization_198[0][0]	(None, 5, 5, 256)	0	batch_nor
block8_9_mixed (Concatenate) n_195[0][0]	(None, 5, 5, 448)	0	activatio activatio

n_198[0][0]

block8_9_conv (Conv2D) mixed[0][0]	(None, 5, 5, 2080)	933920	block8_9_
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block8_9 (Lambda) ac[0][0]	(None, 5, 5, 2080)	0	block8_8_
conv[0][0]			block8_9_

block8_9_ac (Activation) [0][0]	(None, 5, 5, 2080)	0	block8_9
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conv2d_200 (Conv2D) ac[0][0]	(None, 5, 5, 192)	399360	block8_9_
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batch_normalization_200 (BatchN 0[0][0])	(None, 5, 5, 192)	576	conv2d_20
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activation_200 (Activation) malization_200[0][0]	(None, 5, 5, 192)	0	batch_nor
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conv2d_201 (Conv2D) n_200[0][0]	(None, 5, 5, 224)	129024	activatio
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batch_normalization_201 (BatchN 1[0][0])	(None, 5, 5, 224)	672	conv2d_20
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activation_201 (Activation) malization_201[0][0]	(None, 5, 5, 224)	0	batch_nor
---	-------------------	---	-----------

conv2d_199 (Conv2D) ac[0][0]	(None, 5, 5, 192)	399360	block8_9_
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conv2d_202 (Conv2D) n_201[0][0]	(None, 5, 5, 256)	172032	activatio
------------------------------------	-------------------	--------	-----------

batch_normalization_199 (BatchN 9[0][0])	(None, 5, 5, 192)	576	conv2d_19
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batch_normalization_202 (BatchN 2[0][0])	(None, 5, 5, 256)	768	conv2d_20
---	-------------------	-----	-----------

activation_199 (Activation) malization_199[0][0]	(None, 5, 5, 192)	0	batch_nor
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activation_202 (Activation)	(None, 5, 5, 256)	0	batch_normalization_202[0][0]
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block8_10_mixed (Concatenate)	(None, 5, 5, 448)	0	activation_199[0][0]
			activation_202[0][0]

block8_10_conv (Conv2D)	(None, 5, 5, 2080)	933920	block8_10_mixed[0][0]
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block8_10 (Lambda)	(None, 5, 5, 2080)	0	block8_9_conv[0][0]
			block8_10_conv[0][0]

conv_7b (Conv2D)	(None, 5, 5, 1536)	3194880	block8_10[0][0]
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conv_7b_bn (BatchNormalization)	(None, 5, 5, 1536)	4608	conv_7b[0][0]
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conv_7b_ac (Activation)	(None, 5, 5, 1536)	0	conv_7b_bn[0][0]
-------------------------	--------------------	---	------------------

flatten (Flatten)	(None, 38400)	0	conv_7b_ac[0][0]
-------------------	---------------	---	------------------

dropout (Dropout)	(None, 38400)	0	flatten[0][0]
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dense (Dense)	(None, 3)	115203	dropout[0][0]
---------------	-----------	--------	---------------

```
=====
Total params: 54,451,939
Trainable params: 54,391,395
Non-trainable params: 60,544
```

None

Epoch 1/10

```
267/267 [=====] - 202s 756ms/step - loss: 0.4346
- accuracy: 0.8329 - val_loss: 0.2765 - val_accuracy: 0.9267
```

Epoch 2/10

```
267/267 [=====] - 198s 741ms/step - loss: 0.1135
- accuracy: 0.9612 - val_loss: 0.1893 - val_accuracy: 0.9413
```

Epoch 3/10

```
267/267 [=====] - 197s 739ms/step - loss: 0.0564
- accuracy: 0.9813 - val_loss: 0.2115 - val_accuracy: 0.9352
```

Epoch 4/10

```
267/267 [=====] - 198s 740ms/step - loss: 0.0498
```

```

- accuracy: 0.9825 - val_loss: 0.2398 - val_accuracy: 0.9371
Epoch 5/10
267/267 [=====] - 198s 740ms/step - loss: 0.0405
- accuracy: 0.9870 - val_loss: 0.3607 - val_accuracy: 0.9258
Epoch 6/10
267/267 [=====] - 198s 740ms/step - loss: 0.0268
- accuracy: 0.9913 - val_loss: 0.2718 - val_accuracy: 0.9465
Epoch 7/10
267/267 [=====] - 198s 740ms/step - loss: 0.0283
- accuracy: 0.9917 - val_loss: 0.2086 - val_accuracy: 0.9479
Epoch 8/10
267/267 [=====] - 198s 741ms/step - loss: 0.0152
- accuracy: 0.9947 - val_loss: 0.2407 - val_accuracy: 0.9497
Epoch 9/10
267/267 [=====] - 198s 740ms/step - loss: 0.0283
- accuracy: 0.9910 - val_loss: 0.2106 - val_accuracy: 0.9512
Epoch 10/10
267/267 [=====] - 198s 740ms/step - loss: 0.0235
- accuracy: 0.9926 - val_loss: 0.4271 - val_accuracy: 0.9286

```

Using TensorFlow backend.

```

-----
-
FileNotFoundError                                Traceback (most recent call last)
<ipython-input-5-b881102f47d3> in <module>()
      59 from keras.models import load_model
      60 model_json = model.to_json()
----> 61 with open("/content/drive/My Drive/Skin Cancer DATA/2modelInceptionv2imgSkin.json", "w") as json_file :
      62     json_file.write(model_json)
      63

FileNotFoundError: [Errno 2] No such file or directory: '/content/drive/My Drive/Skin Cancer DATA/2modelInceptionv2imgSkin.json'

```

In []:

```
from keras.models import model_from_json
from keras.models import load_model
model_json = model.to_json()
with open("/content/drive/My Drive/Skin Cancer DATA/2modelInceptionv2imgSkin.json", "w") as json_file :
    json_file.write(model_json)

model.save_weights("/content/drive/My Drive/Skin Cancer DATA/2modelInceptionv2imgSkin.h5")
print("Saved model to disk")

model.save('/content/drive/My Drive/Skin Cancer DATA/2CNNInceptionv2imgSkin.h5')
```

Saved model to disk

WARNING:tensorflow:From /usr/local/lib/python3.6/dist-packages/tensorflow/python/ops/resource_variable_ops.py:1817: calling BaseResourceVariable.__init__ (from tensorflow.python.ops.resource_variable_ops) with constraint is deprecated and will be removed in a future version.

Instructions for updating:

If using Keras pass *_constraint arguments to layers.

INFO:tensorflow:Assets written to: /content/drive/My Drive/Skin Cancer DATA/CNNInceptionv2imgSkin.model/assets

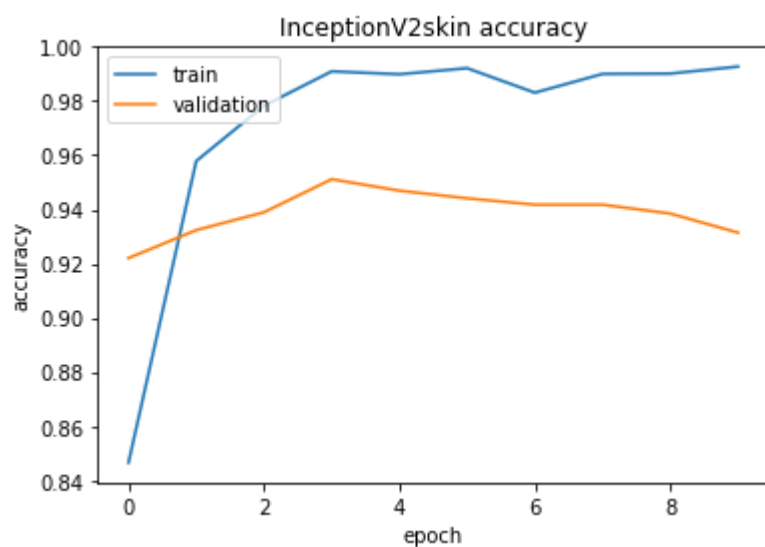
In []:

```
print(hist_big.history.keys())
plt.figure(1)
plt.plot(hist_big.history['accuracy'])
plt.plot(hist_big.history['val_accuracy'])
plt.title('InceptionV2skin accuracy')
plt.ylabel('accuracy')
plt.xlabel('epoch')
plt.legend(['train', 'validation'], loc='upper left')
plt.show()
```

```
print(hist_big.history.keys())
plt.figure(2)
plt.plot(hist_big.history['loss'])
plt.plot(hist_big.history['val_loss'])
plt.title('InceptionV2skin loss')
plt.ylabel('loss')
plt.xlabel('epoch')
plt.legend(['Train', 'Validation'], loc='upper left')
plt.show()
```



```
dict_keys(['loss', 'accuracy', 'val_loss', 'val_accuracy'])
```



```
dict_keys(['loss', 'accuracy', 'val_loss', 'val_accuracy'])
```

