```
import warnings
warnings.filterwarnings("ignore")
import os
import cv2
import numpy as np
import matplotlib.pyplot as plt
%matplotlib inline
import seaborn as sns
from tqdm import tqdm
from sklearn.model_selection import train_test_split
from sklearn.metrics import accuracy_score, classification_report, confusion_matrix
import tensorflow as tf
from tensorflow.keras.utils import to_categorical
```

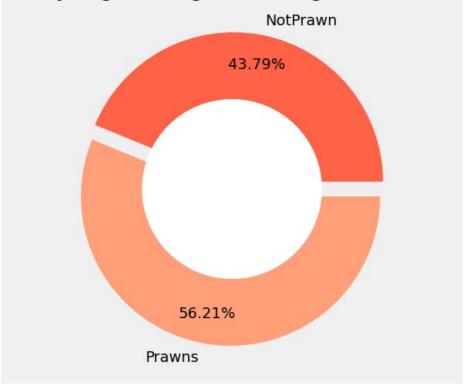
```
In [2]: # Load class labels from directory
  base_dir='PrawnDetection'
  class_labels = os.listdir(base_dir)
  class_labels.sort()
  print(class_labels)
```

['NotPrawn', 'Prawns']

```
In [3]: # Display the distribution of samples for each class
    chart_data = []
    for target in class_labels:
        path = os.path.join(base_dir, target)
        size = len(os.listdir(path))
        chart_data.append(size)
        print(f'The target {target} has {size} samples in the dataset')
```

The target NotPrawn has 1478 samples in the dataset The target Prawns has 1897 samples in the dataset

Analyzing training data using donut chart



```
In [5]: data=[]
    labels=[]
    count=0
    for target in tqdm(class_labels):
```

```
path = os.path.join(base dir, target)
            image_names = os.listdir(path)
            for image_name in image_names:
                image path = os.path.join(path, image name)
                image = cv2.imread(image_path)
                image = cv2.cvtColor(image,cv2.COLOR_BGR2RGB)
                image = cv2.resize(image,(128, 128)) # Adjusted to square images
                image = np.array(image)
                image = image / 255.0
                data.append(image)
                labels.append(count)
            count += 1 # Increment the count after processing all images in the class
        data = np.array(data)
        labels = np.array(labels)
        print(data.shape, labels.shape)
                                                                                             | 2/2 [02:26<00:00, 73
        100%|
        .48s/it]
        (3375, 128, 128, 3) (3375,)
In [6]: # Function to display images
        from random import randint
        def show_images(X, labels, class_labels):
            plt.figure(figsize=(10, 10))
            for i in range(16): # Display 16 images in a 4x4 grid
                idx = randint(0, X.shape[0] - 1) # Generate a random index
                ax = plt.subplot(4, 4, i + 1) # Subplot position
                # Debugging: Print index and corresponding label
                print(f"Index: {idx}, Label: {labels[idx]}, Class: {class_labels[idx]]}")
                plt.imshow(X[idx])
                plt.axis("off")
                plt.title("Class: {}".format(class labels[labels[idx]])) # Display correct class label
            plt.tight_layout()
            plt.show()
        # Show images to verify correctness
        show images(data, labels, class labels)
        Index: 1640, Label: 1, Class: Prawns
        Index: 1534, Label: 1, Class: Prawns
        Index: 1754, Label: 1, Class: Prawns
        Index: 3213, Label: 1, Class: Prawns
        Index: 2852, Label: 1, Class: Prawns
        Index: 3273, Label: 1, Class: Prawns
        Index: 764, Label: 0, Class: NotPrawn
        Index: 711, Label: 0, Class: NotPrawn
        Index: 2150, Label: 1, Class: Prawns
Index: 553, Label: 0, Class: NotPrawn
        Index: 2735, Label: 1, Class: Prawns
        Index: 2893, Label: 1, Class: Prawns
        Index: 3108, Label: 1, Class: Prawns
        Index: 2708, Label: 1, Class: Prawns
        Index: 2801, Label: 1, Class: Prawns
        Index: 361, Label: 0, Class: NotPrawn
```



In [7]:

In [8]: densenet_model=tf.keras.applications.DenseNet201(include_top=False, weights="imagenet",input_tensor=None,input_shape=(128,128,3),pooling="max",classes=1000) densenet model.trainable=False

In [9]: inputs=densenet_model.input m=tf.keras.layers.Dense(512, activation='relu')(densenet_model.output) outputs=tf.keras.layers.Dense(len(class_labels), activation='softmax')(m) dense_model=tf.keras.Model(inputs=inputs,outputs=outputs)

In [10]: dense_model.compile(optimizer='adam',loss='categorical_crossentropy',metrics=['accuracy'])

In [11]: dense_model.summary()

Model: "functional"

Layer (type)	Output Shape	Param #	Connected to
<pre>input_layer (InputLayer)</pre>	(None, 128, 128, 3)	0	-
zero_padding2d (ZeroPadding2D)	(None, 134, 134, 3)	0	input_layer[0][0]
conv1_conv (Conv2D)	(None, 64, 64, 64)	9,408	zero_padding2d[0][0]

<pre>conv1_bn (BatchNormalization)</pre>	(None, 64, 64, 64)	256	conv1_conv[0][0]
conv1_relu (Activation)	(None, 64, 64, 64)	0	conv1_bn[0][0]
zero_padding2d_1 (ZeroPadding2D)	(None, 66, 66, 64)	0	conv1_relu[0][0]
pool1 (MaxPooling2D)	(None, 32, 32, 64)	0	zero_padding2d_1[0][0]
conv2_block1_0_bn (BatchNormalization)	(None, 32, 32, 64)	256	pool1[0][0]
<pre>conv2_block1_0_relu (Activation)</pre>	(None, 32, 32, 64)	0	conv2_block1_0_bn[0][0]
conv2_block1_1_conv (Conv2D)	(None, 32, 32, 128)	8,192	conv2_block1_0_relu[0][0
<pre>conv2_block1_1_bn (BatchNormalization)</pre>	(None, 32, 32, 128)	512	conv2_block1_1_conv[0][0
<pre>conv2_block1_1_relu (Activation)</pre>	(None, 32, 32, 128)	0	conv2_block1_1_bn[0][0]
conv2_block1_2_conv (Conv2D)	(None, 32, 32, 32)	36,864	conv2_block1_1_relu[0][0
<pre>conv2_block1_concat (Concatenate)</pre>	(None, 32, 32, 96)	0	pool1[0][0], conv2_block1_2_conv[0][0
<pre>conv2_block2_0_bn (BatchNormalization)</pre>	(None, 32, 32, 96)	384	conv2_block1_concat[0][0
conv2_block2_0_relu (Activation)	(None, 32, 32, 96)	0	conv2_block2_0_bn[0][0]
conv2_block2_1_conv (Conv2D)	(None, 32, 32, 128)	12,288	conv2_block2_0_relu[0][0
conv2_block2_1_bn (BatchNormalization)	(None, 32, 32, 128)	512	conv2_block2_1_conv[0][0
conv2_block2_1_relu (Activation)	(None, 32, 32, 128)	0	conv2_block2_1_bn[0][0]
conv2_block2_2_conv (Conv2D)	(None, 32, 32, 32)	36,864	conv2_block2_1_relu[0][(
<pre>conv2_block2_concat (Concatenate)</pre>	(None, 32, 32, 128)	0	conv2_block1_concat[0][0 conv2_block2_2_conv[0][0
conv2_block3_0_bn (BatchNormalization)	(None, 32, 32, 128)	512	conv2_block2_concat[0][0
conv2_block3_0_relu (Activation)	(None, 32, 32, 128)	0	conv2_block3_0_bn[0][0]
conv2_block3_1_conv (Conv2D)	(None, 32, 32, 128)	16,384	conv2_block3_0_relu[0][(
<pre>conv2_block3_1_bn (BatchNormalization)</pre>	(None, 32, 32, 128)	512	conv2_block3_1_conv[0][0
conv2_block3_1_relu (Activation)	(None, 32, 32, 128)	0	conv2_block3_1_bn[0][0]
conv2_block3_2_conv (Conv2D)	(None, 32, 32, 32)	36,864	conv2_block3_1_relu[0][(
<pre>conv2_block3_concat (Concatenate)</pre>	(None, 32, 32, 160)	0	conv2_block2_concat[0][0 conv2_block3_2_conv[0][0
conv2_block4_0_bn (BatchNormalization)	(None, 32, 32, 160)	640	conv2_block3_concat[0][0
conv2_block4_0_relu (Activation)	(None, 32, 32, 160)	0	conv2_block4_0_bn[0][0]
conv2_block4_1_conv (Conv2D)	(None, 32, 32, 128)	20,480	conv2_block4_0_relu[0][0
conv2_block4_1_bn (BatchNormalization)	(None, 32, 32, 128)	512	conv2_block4_1_conv[0][
conv2_block4_1_relu (Activation)	(None, 32, 32, 128)	0	conv2_block4_1_bn[0][0]
conv2_block4_2_conv (Conv2D)	(None, 32, 32, 32)	36,864	conv2_block4_1_relu[0][(
conv2_block4_concat	(None, 32, 32, 192)	0	conv2_block3_concat[0][6

(Concatenate)			conv2_block4_2_conv[0][0
<pre>conv2_block5_0_bn (BatchNormalization)</pre>	(None, 32, 32, 192)	768	conv2_block4_concat[0][0
conv2_block5_0_relu (Activation)	(None, 32, 32, 192)	Θ	conv2_block5_0_bn[0][0]
conv2_block5_1_conv (Conv2D)	(None, 32, 32, 128)	24,576	conv2_block5_0_relu[0][0
conv2_block5_1_bn (BatchNormalization)	(None, 32, 32, 128)	512	conv2_block5_1_conv[0][0
conv2_block5_1_relu (Activation)	(None, 32, 32, 128)	0	conv2_block5_1_bn[0][0]
conv2_block5_2_conv (Conv2D)	(None, 32, 32, 32)	36,864	conv2_block5_1_relu[0][0
<pre>conv2_block5_concat (Concatenate)</pre>	(None, 32, 32, 224)	0	conv2_block4_concat[0][0 conv2_block5_2_conv[0][0
<pre>conv2_block6_0_bn (BatchNormalization)</pre>	(None, 32, 32, 224)	896	conv2_block5_concat[0][0
conv2_block6_0_relu (Activation)	(None, 32, 32, 224)	Θ	conv2_block6_0_bn[0][0]
conv2_block6_1_conv (Conv2D)	(None, 32, 32, 128)	28,672	conv2_block6_0_relu[0][0
conv2_block6_1_bn (BatchNormalization)	(None, 32, 32, 128)	512	conv2_block6_1_conv[0][0
<pre>conv2_block6_1_relu (Activation)</pre>	(None, 32, 32, 128)	0	conv2_block6_1_bn[0][0]
conv2_block6_2_conv (Conv2D)	(None, 32, 32, 32)	36,864	conv2_block6_1_relu[0][0
<pre>conv2_block6_concat (Concatenate)</pre>	(None, 32, 32, 256)	0	conv2_block5_concat[0][0 conv2_block6_2_conv[0][0
<pre>pool2_bn (BatchNormalization)</pre>	(None, 32, 32, 256)	1,024	conv2_block6_concat[0][0
pool2_relu (Activation)	(None, 32, 32, 256)	0	pool2_bn[0][0]
pool2_conv (Conv2D)	(None, 32, 32, 128)	32,768	pool2_relu[0][0]
<pre>pool2_pool (AveragePooling2D)</pre>	(None, 16, 16, 128)	0	pool2_conv[0][0]
<pre>conv3_block1_0_bn (BatchNormalization)</pre>	(None, 16, 16, 128)	512	pool2_pool[0][0]
<pre>conv3_block1_0_relu (Activation)</pre>	(None, 16, 16, 128)	0	conv3_block1_0_bn[0][0]
conv3_block1_1_conv (Conv2D)	(None, 16, 16, 128)	16,384	conv3_block1_0_relu[0][0
<pre>conv3_block1_1_bn (BatchNormalization)</pre>	(None, 16, 16, 128)	512	conv3_block1_1_conv[0][0
<pre>conv3_block1_1_relu (Activation)</pre>	(None, 16, 16, 128)	0	conv3_block1_1_bn[0][0]
conv3_block1_2_conv (Conv2D)	(None, 16, 16, 32)	36,864	conv3_block1_1_relu[0][0
<pre>conv3_block1_concat (Concatenate)</pre>	(None, 16, 16, 160)	0	pool2_pool[0][0], conv3_block1_2_conv[0][0
<pre>conv3_block2_0_bn (BatchNormalization)</pre>	(None, 16, 16, 160)	640	conv3_block1_concat[0][0
conv3_block2_0_relu (Activation)	(None, 16, 16, 160)	0	conv3_block2_0_bn[0][0]
conv3_block2_1_conv (Conv2D)	(None, 16, 16, 128)	20,480	conv3_block2_0_relu[0][0
conv3_block2_1_bn (BatchNormalization)	(None, 16, 16, 128)	512	conv3_block2_1_conv[0][0
conv3_block2_1_relu (Activation)	(None, 16, 16, 128)	Θ	conv3_block2_1_bn[0][0]
conv3 block2 2 conv (Conv2D)	(None, 16, 16, 32)	36,864	conv3 block2 1 relu[0][0

conv3_block2_concat (Concatenate)	(None, 16, 16, 192)	0	conv3_block1_concat[0][0 conv3_block2_2_conv[0][0
conv3_block3_0_bn (BatchNormalization)	(None, 16, 16, 192)	768	conv3_block2_concat[0][0
conv3_block3_0_relu (Activation)	(None, 16, 16, 192)	0	conv3_block3_0_bn[0][0]
conv3_block3_1_conv (Conv2D)	(None, 16, 16, 128)	24,576	conv3_block3_0_relu[0][0
conv3_block3_1_bn (BatchNormalization)	(None, 16, 16, 128)	512	conv3_block3_1_conv[0][0
conv3_block3_1_relu (Activation)	(None, 16, 16, 128)	0	conv3_block3_1_bn[0][0]
conv3_block3_2_conv (Conv2D)	(None, 16, 16, 32)	36,864	conv3_block3_1_relu[0][0
conv3_block3_concat (Concatenate)	(None, 16, 16, 224)	0	conv3_block2_concat[0][0 conv3_block3_2_conv[0][0
conv3_block4_0_bn (BatchNormalization)	(None, 16, 16, 224)	896	conv3_block3_concat[0][0
conv3_block4_0_relu (Activation)	(None, 16, 16, 224)	0	conv3_block4_0_bn[0][0]
conv3_block4_1_conv (Conv2D)	(None, 16, 16, 128)	28,672	conv3_block4_0_relu[0][0
conv3_block4_1_bn (BatchNormalization)	(None, 16, 16, 128)	512	conv3_block4_1_conv[0][0
conv3_block4_1_relu (Activation)	(None, 16, 16, 128)	0	conv3_block4_1_bn[0][0]
conv3_block4_2_conv (Conv2D)	(None, 16, 16, 32)	36,864	conv3_block4_1_relu[0][0
conv3_block4_concat (Concatenate)	(None, 16, 16, 256)	0	conv3_block3_concat[0][0 conv3_block4_2_conv[0][0
conv3_block5_0_bn (BatchNormalization)	(None, 16, 16, 256)	1,024	conv3_block4_concat[0][0
conv3_block5_0_relu (Activation)	(None, 16, 16, 256)	0	conv3_block5_0_bn[0][0]
conv3_block5_1_conv (Conv2D)	(None, 16, 16, 128)	32,768	conv3_block5_0_relu[0][0
conv3_block5_1_bn (BatchNormalization)	(None, 16, 16, 128)	512	conv3_block5_1_conv[0][0
conv3_block5_1_relu (Activation)	(None, 16, 16, 128)	0	conv3_block5_1_bn[0][0]
conv3_block5_2_conv (Conv2D)	(None, 16, 16, 32)	36,864	conv3_block5_1_relu[0][0
conv3_block5_concat (Concatenate)	(None, 16, 16, 288)	0	conv3_block4_concat[0][0 conv3_block5_2_conv[0][0
conv3_block6_0_bn (BatchNormalization)	(None, 16, 16, 288)	1,152	conv3_block5_concat[0][0
conv3_block6_0_relu (Activation)	(None, 16, 16, 288)	0	conv3_block6_0_bn[0][0]
conv3_block6_1_conv (Conv2D)	(None, 16, 16, 128)	36,864	conv3_block6_0_relu[0][0
conv3_block6_1_bn (BatchNormalization)	(None, 16, 16, 128)	512	conv3_block6_1_conv[0][0
conv3_block6_1_relu (Activation)	(None, 16, 16, 128)	0	conv3_block6_1_bn[0][0]
conv3_block6_2_conv (Conv2D)	(None, 16, 16, 32)	36,864	conv3_block6_1_relu[0][0
conv3_block6_concat (Concatenate)	(None, 16, 16, 320)	0	conv3_block5_concat[0][0 conv3_block6_2_conv[0][0
conv3_block7_0_bn (BatchNormalization)	(None, 16, 16, 320)	1,280	conv3_block6_concat[0][0
conv3_block7_0_relu	(None, 16, 16, 320)	0	conv3_block7_0_bn[0][0]

(Activation)			
conv3_block7_1_conv (Conv2D)	(None, 16, 16, 128)	40,960	conv3_block7_0_relu[0][0
conv3_block7_1_bn (BatchNormalization)	(None, 16, 16, 128)	512	conv3_block7_1_conv[0][0
conv3_block7_1_relu (Activation)	(None, 16, 16, 128)	0	conv3_block7_1_bn[0][0]
conv3_block7_2_conv (Conv2D)	(None, 16, 16, 32)	36,864	conv3_block7_1_relu[0][0
conv3_block7_concat (Concatenate)	(None, 16, 16, 352)	0	conv3_block6_concat[0][0 conv3_block7_2_conv[0][0
conv3_block8_0_bn (BatchNormalization)	(None, 16, 16, 352)	1,408	conv3_block7_concat[0][0
conv3_block8_0_relu (Activation)	(None, 16, 16, 352)	0	conv3_block8_0_bn[0][0]
conv3_block8_1_conv (Conv2D)	(None, 16, 16, 128)	45,056	conv3_block8_0_relu[0][0
conv3_block8_1_bn (BatchNormalization)	(None, 16, 16, 128)	512	conv3_block8_1_conv[0][0
conv3_block8_1_relu (Activation)	(None, 16, 16, 128)	0	conv3_block8_1_bn[0][0]
conv3_block8_2_conv (Conv2D)	(None, 16, 16, 32)	36,864	conv3_block8_1_relu[0][0
conv3_block8_concat (Concatenate)	(None, 16, 16, 384)	0	conv3_block7_concat[0][0 conv3_block8_2_conv[0][0
conv3_block9_0_bn (BatchNormalization)	(None, 16, 16, 384)	1,536	conv3_block8_concat[0][0
conv3_block9_0_relu (Activation)	(None, 16, 16, 384)	0	conv3_block9_0_bn[0][0]
conv3_block9_1_conv (Conv2D)	(None, 16, 16, 128)	49,152	conv3_block9_0_relu[0][0
conv3_block9_1_bn (BatchNormalization)	(None, 16, 16, 128)	512	conv3_block9_1_conv[0][0
conv3_block9_1_relu (Activation)	(None, 16, 16, 128)	0	conv3_block9_1_bn[0][0]
conv3_block9_2_conv (Conv2D)	(None, 16, 16, 32)	36,864	conv3_block9_1_relu[0][0
conv3_block9_concat (Concatenate)	(None, 16, 16, 416)	0	conv3_block8_concat[0][0 conv3_block9_2_conv[0][0
conv3_block10_0_bn (BatchNormalization)	(None, 16, 16, 416)	1,664	conv3_block9_concat[0][0
conv3_block10_0_relu (Activation)	(None, 16, 16, 416)	0	conv3_block10_0_bn[0][0]
conv3_block10_1_conv (Conv2D)	(None, 16, 16, 128)	53,248	conv3_block10_0_relu[0][
conv3_block10_1_bn (BatchNormalization)	(None, 16, 16, 128)	512	conv3_block10_1_conv[0][
conv3_block10_1_relu (Activation)	(None, 16, 16, 128)	0	conv3_block10_1_bn[0][0]
conv3_block10_2_conv (Conv2D)	(None, 16, 16, 32)	36,864	conv3_block10_1_relu[0][
conv3_block10_concat (Concatenate)	(None, 16, 16, 448)	0	conv3_block9_concat[0][0 conv3_block10_2_conv[0][
conv3_block11_0_bn (BatchNormalization)	(None, 16, 16, 448)	1,792	conv3_block10_concat[0][
conv3_block11_0_relu (Activation)	(None, 16, 16, 448)	0	conv3_block11_0_bn[0][0]
conv3_block11_1_conv (Conv2D)	(None, 16, 16, 128)	57,344	conv3_block11_0_relu[0][
conv3_block11_1_bn (BatchNormalization)	(None, 16, 16, 128)	512	conv3_block11_1_conv[0][
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conv3_block11_1_relu (Activation)	(None, 16, 16, 128)	0	conv3_block11_1_bn[0][0]
conv3_block11_2_conv (Conv2D)	(None, 16, 16, 32)	36,864	conv3_block11_1_relu[0][
conv3_block11_concat (Concatenate)	(None, 16, 16, 480)	0	conv3_block10_concat[0][conv3_block11_2_conv[0][
conv3_block12_0_bn (BatchNormalization)	(None, 16, 16, 480)	1,920	conv3_block11_concat[0][
conv3_block12_0_relu (Activation)	(None, 16, 16, 480)	0	conv3_block12_0_bn[0][0]
conv3_block12_1_conv (Conv2D)	(None, 16, 16, 128)	61,440	conv3_block12_0_relu[0][
conv3_block12_1_bn (BatchNormalization)	(None, 16, 16, 128)	512	conv3_block12_1_conv[0][
conv3_block12_1_relu (Activation)	(None, 16, 16, 128)	0	conv3_block12_1_bn[0][0]
conv3_block12_2_conv (Conv2D)	(None, 16, 16, 32)	36,864	conv3_block12_1_relu[0][
conv3_block12_concat (Concatenate)	(None, 16, 16, 512)	0	conv3_block11_concat[0][conv3_block12_2_conv[0][
pool3_bn (BatchNormalization)	(None, 16, 16, 512)	2,048	conv3_block12_concat[0][
pool3_relu (Activation)	(None, 16, 16, 512)	0	pool3_bn[0][0]
pool3_conv (Conv2D)	(None, 16, 16, 256)	131,072	pool3_relu[0][0]
<pre>pool3_pool (AveragePooling2D)</pre>	(None, 8, 8, 256)	0	pool3_conv[0][0]
conv4_block1_0_bn (BatchNormalization)	(None, 8, 8, 256)	1,024	pool3_pool[0][0]
conv4_block1_0_relu (Activation)	(None, 8, 8, 256)	0	conv4_block1_0_bn[0][0]
conv4_block1_1_conv (Conv2D)	(None, 8, 8, 128)	32,768	conv4_block1_0_relu[0][0
conv4_block1_1_bn (BatchNormalization)	(None, 8, 8, 128)	512	conv4_block1_1_conv[0][0
conv4_block1_1_relu (Activation)	(None, 8, 8, 128)	0	conv4_block1_1_bn[0][0]
conv4_block1_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block1_1_relu[0][0
conv4_block1_concat (Concatenate)	(None, 8, 8, 288)	0	pool3_pool[0][0], conv4_block1_2_conv[0][0
conv4_block2_0_bn (BatchNormalization)	(None, 8, 8, 288)	1,152	conv4_block1_concat[0][0
conv4_block2_0_relu (Activation)	(None, 8, 8, 288)	0	conv4_block2_0_bn[0][0]
conv4_block2_1_conv (Conv2D)	(None, 8, 8, 128)	36,864	conv4_block2_0_relu[0][0
conv4_block2_1_bn (BatchNormalization)	(None, 8, 8, 128)	512	conv4_block2_1_conv[0][0
conv4_block2_1_relu (Activation)	(None, 8, 8, 128)	0	conv4_block2_1_bn[0][0]
conv4_block2_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block2_1_relu[0][0
conv4_block2_concat (Concatenate)	(None, 8, 8, 320)	0	conv4_block1_concat[0][0 conv4_block2_2_conv[0][0
conv4_block3_0_bn (BatchNormalization)	(None, 8, 8, 320)	1,280	conv4_block2_concat[0][0
conv4_block3_0_relu (Activation)	(None, 8, 8, 320)	0	conv4_block3_0_bn[0][0]
conv4_block3_1_conv (Conv2D)	(None, 8, 8, 128)	40,960	conv4_block3_0_relu[0][0
conv4_block3_1_bn (BatchNormalization)	(None, 8, 8, 128)	512	conv4_block3_1_conv[0][0

Conv4_block3_conv (Conv2D)	<u> </u>	 	+	
Conv4 black4 Concat (Concatenate)	conv4_block3_1_relu (Activation)	(None, 8, 8, 128)	0	conv4_block3_1_bn[0][0]
conval black4 B bn (Wone, 8, 8, 352) 1,488 conval black3 Conval black3 Conval black4 B bn[0] [8 conval black4 I conv (Conv20) (None, 8, 8, 352) 8 conval black4 B bn[0] [8 conval black4 I conv (Conv20) (None, 8, 8, 128) 45,956 conval black4 I conv (Conv20) Conval black4 I conv (Conv20) Conval black4 I conv (Conv20) Conval black4 I conval black5 I conval black6 I conval black5 I conval	conv4_block3_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block3_1_relu[0][0
	conv4_block3_concat (Concatenate)	(None, 8, 8, 352)	0	conv4_block2_concat[0][0 conv4_block3_2_conv[0][0
Conv4_block4_1_conv (Conv2D)		(None, 8, 8, 352)	1,408	conv4_block3_concat[0][0
Conv4_block4_1_bn (Rone, 8, 8, 128) S12 Conv4_block4_1_conv[0] (RotchNormalization) (Rone, 8, 8, 128) S12 Conv4_block4_1_conv[0] (Conv4_block4_1_relu (Rone, 8, 8, 128) S12 Conv4_block4_1_bn[0][6] (Rotchivation) (Rone, 8, 8, 32) S16,864 Conv4_block4_1_relu[0] (Conv4_block4_2_conv (Conv2D) (Rone, 8, 8, 334) Conv4_block4_2_conv[0] (Conv4_block5_0_bn (RotchNormalization) (Rone, 8, 8, 384) Conv4_block5_0_conv[0] (RotchNormalization) (Rone, 8, 8, 384) Conv4_block5_0_conv[0] (RotchNormalization) (Rone, 8, 8, 384) Conv4_block5_0_bn[0][6] (RotchNormalization) (Rone, 8, 8, 128) Conv4_block5_0_conv[0] (RotchNormalization) (Rone, 8, 8, 128) Conv4_block5_0_conv[0] (RotchNormalization) (Rone, 8, 8, 128) Conv4_block5_0_conv[0] (RotchNormalization) (Rone, 8, 8, 128) Conv4_block5_1_conv[0] (RotchNormalization) (Rone, 8, 8, 128) Conv4_block5_1_conv[0] (RotchNormalization) (Rone, 8, 8, 321) RotchNormalization) (Rone, 8, 8, 321) RotchNormalization) (Rone, 8, 8, 3416) RotchNormalization) (Rone, 8, 8, 3416) RotchNormalization) (Rone, 8, 8, 3416) RotchNormalization) (Rone, 8, 8, 3128) RotchNormalization) (Rone, 8, 8, 328) RotchNormalization) (Rone, 8, 8, 348) RotchNormalization) (Rone, 8, 8, 328) RotchNormalization) (Rone, 8, 8, 328) RotchNormalization) (Rone, 8, 8, 328) R		(None, 8, 8, 352)	0	conv4_block4_0_bn[0][0]
(BatchNormalization) (None, 8, 8, 128) 0 conv4_block4_l_bn[0][0 conv4_block4_l_relu (None, 8, 8, 322) 36,864 conv4_block4_l_relu[0] conv4_block4_concat (None, 8, 8, 384) 0 conv4_block3_concat[0] conv4_block5_0. (None, 8, 8, 384) 1,536 conv4_block4_concat[0] conv4_block5_0. (None, 8, 8, 384) 1,536 conv4_block4_concat[0] conv4_block5_1. (None, 8, 8, 384) 0 conv4_block5_concat[0] conv4_block5_1. (None, 8, 8, 384) 0 conv4_block5_concat[0] conv4_block5_1. (None, 8, 8, 128) 49,152 conv4_block5_e_relu[0] conv4_block5_1. (None, 8, 8, 128) 512 conv4_block5_e_relu[0] conv4_block5_1. (None, 8, 8, 128) 512 conv4_block5_1_bn[0][0 conv4_block5_1. (None, 8, 8, 322) 36,864 conv4_block5_1_bn[0][0 conv4_block6_0. (None, 8, 8, 3416) 0 conv4_block5_concat[0] conv4_block6_0. (None, 8, 8, 416) 0 conv4_block6_concat[0] conv4_block6_1. (None, 8, 8, 128) 53,248 conv4_block6_1. (None, 8, 8, 128) 53,248<	conv4_block4_1_conv (Conv2D)	(None, 8, 8, 128)	45,056	conv4_block4_0_relu[0][0
Conv4_block4_2_conv (Conv2D) (None, 8, 8, 32) 36,864 conv4_block4_1_retu[6]		(None, 8, 8, 128)	512	conv4_block4_1_conv[0][0
Conv4_block4_concat (Concatenate)	conv4_block4_1_relu (Activation)	(None, 8, 8, 128)	0	conv4_block4_1_bn[0][0]
(Concatenate) conv4_block3_2_conv[8] conv4_block5_0_bn (None, 8, 8, 384) 1,536 conv4_block4_concat[0] conv4_block5_0_relu (None, 8, 8, 384) 0 conv4_block5_0_bn[0][0 conv4_block5_0_relu (None, 8, 8, 128) 49,152 conv4_block5_0_relu[0] conv4_block5_1_tonv (None, 8, 8, 128) 512 conv4_block5_1_conv[0] conv4_block5_1_relu (None, 8, 8, 128) 0 conv4_block5_1_bn[0][0 conv4_block5_1_relu (None, 8, 8, 32) 36,864 conv4_block5_1_relu[0] conv4_block5_2_conv (None, 8, 8, 416) 0 conv4_block5_1_relu[0] conv4_block5_0_concat (None, 8, 8, 416) 0 conv4_block5_1_conv[0] conv4_block6_0_bn (None, 8, 8, 416) 1,664 conv4_block5_concat[0] conv4_block6_0_relu (None, 8, 8, 128) 53,248 conv4_block6_0_relu[0] conv4_block6_1_renv (None, 8, 8, 128) 53,248 conv4_block6_0_relu[0] conv4_block6_1_relu (None, 8, 8, 128) 512 conv4_block6_0_relu[0] conv4_block6_1_relu (None, 8, 8, 32) 36,864 conv4_blo	conv4_block4_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block4_1_relu[0][0
(BatchNormalization) (None, 8, 8, 384) (None, 8, 8, 384) (None, 8, 8, 384) (None, 8, 8, 128) (None, 8, 8, 416) (None, 8, 8, 128) (None, 8, 8, 448) (None, 8,		(None, 8, 8, 384)	0	conv4_block3_concat[0][0 conv4_block4_2_conv[0][0
Cactivation Conv4_block5_1_conv (Conv2D)	conv4_block5_0_bn (BatchNormalization)	(None, 8, 8, 384)	1,536	conv4_block4_concat[0][0
conv4_block5 1 bn (BatchNormalization) (None, 8, 8, 128) 512 conv4_block5_1_conv[0] conv4_block5_1_relu (Activation) (None, 8, 8, 128) 0 conv4_block5_1_bn[0][6] conv4_block5_2_conv (Conv2D) (None, 8, 8, 32) 36,864 conv4_block5_1_relu[0] conv4_block5_concat (Concatenate) (None, 8, 8, 416) 0 conv4_block5_concat[0] conv4_block6_0_bn (BatchNormalization) (None, 8, 8, 416) 1,664 conv4_block5_concat[0] conv4_block6_0_relu (Activation) (None, 8, 8, 416) 0 conv4_block5_concat[0] conv4_block6_1_conv (Conv2D) (None, 8, 8, 128) 53,248 conv4_block6_0_relu[0] conv4_block6_1_telu (Activation) (None, 8, 8, 128) 512 conv4_block6_1_conv[0] conv4_block6_1_relu (Activation) (None, 8, 8, 128) 0 conv4_block6_1_conv[0] conv4_block6_2_conv (Conv2D) (None, 8, 8, 32) 36,864 conv4_block6_1_relu[0] conv4_block6_2_conv (Conv2D) (None, 8, 8, 448) 0 conv4_block6_concat[0] conv4_block7_0_relu (BatchNormalization) (None, 8, 8, 448) 0 conv4_block6_concat[0] conv4_block7_1_conv (Conv2D)		(None, 8, 8, 384)	0	conv4_block5_0_bn[0][0]
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(BatchNormalization) (None, 8, 8, 448) 0 conv4_block7_0_bn[0][0] conv4_block7_0_relu (Activation) (None, 8, 8, 128) 57,344 conv4_block7_0_relu[0] conv4_block7_1_bn (BatchNormalization) (None, 8, 8, 128) 512 conv4_block7_1_conv[0] conv4_block7_1_relu (Activation) (None, 8, 8, 128) 0 conv4_block7_1_bn[0][0] conv4_block7_2_conv (Conv2D) (None, 8, 8, 32) 36,864 conv4_block7_1_relu[0]	conv4_block6_concat (Concatenate)	(None, 8, 8, 448)	0	conv4_block5_concat[0][0 conv4_block6_2_conv[0][0
(Activation) (None, 8, 8, 128) 57,344 conv4_block7_0_relu[0] conv4_block7_1_bn (BatchNormalization) (None, 8, 8, 128) 512 conv4_block7_1_conv[0] conv4_block7_1_relu (Activation) (None, 8, 8, 128) 0 conv4_block7_1_bn[0][0] conv4_block7_2_conv (Conv2D) (None, 8, 8, 32) 36,864 conv4_block7_1_relu[0]		(None, 8, 8, 448)	1,792	conv4_block6_concat[0][0
conv4_block7_1_bn (BatchNormalization) (None, 8, 8, 128) 512 conv4_block7_1_conv[0] conv4_block7_1_relu (Activation) (None, 8, 8, 128) 0 conv4_block7_1_bn[0][9] conv4_block7_2_conv (Conv2D) (None, 8, 8, 32) 36,864 conv4_block7_1_relu[0]		(None, 8, 8, 448)	0	conv4_block7_0_bn[0][0]
(BatchNormalization) (None, 8, 8, 128) 0 conv4_block7_1_bn[0][9] conv4_block7_1_relu (None, 8, 8, 128) 0 conv4_block7_1_bn[0][9] conv4_block7_2_conv (Conv2D) (None, 8, 8, 32) 36,864 conv4_block7_1_relu[0]	conv4_block7_1_conv (Conv2D)	(None, 8, 8, 128)	57,344	conv4_block7_0_relu[0][0
(Activation) conv4_block7_2_conv (Conv2D) (None, 8, 8, 32) 36,864 conv4_block7_1_relu[0]		(None, 8, 8, 128)	512	conv4_block7_1_conv[0][0
		(None, 8, 8, 128)	0	conv4_block7_1_bn[0][0]
conv4_block7_concat (None, 8, 8, 480) 0 conv4_block6_concat[0]	conv4_block7_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block7_1_relu[0][0
	conv4_block7_concat	(None, 8, 8, 480)	0	conv4_block6_concat[0][0

(Concatenate)			conv4_block7_2_conv[0][0
conv4_block8_0_bn (BatchNormalization)	(None, 8, 8, 480)	1,920	conv4_block7_concat[0][0
conv4_block8_0_relu (Activation)	(None, 8, 8, 480)	0	conv4_block8_0_bn[0][0]
conv4_block8_1_conv (Conv2D)	(None, 8, 8, 128)	61,440	conv4_block8_0_relu[0][0
conv4_block8_1_bn (BatchNormalization)	(None, 8, 8, 128)	512	conv4_block8_1_conv[0][0
conv4_block8_1_relu (Activation)	(None, 8, 8, 128)	0	conv4_block8_1_bn[0][0]
conv4_block8_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block8_1_relu[0][0
conv4_block8_concat (Concatenate)	(None, 8, 8, 512)	0	conv4_block7_concat[0][0 conv4_block8_2_conv[0][0
conv4_block9_0_bn (BatchNormalization)	(None, 8, 8, 512)	2,048	conv4_block8_concat[0][0
conv4_block9_0_relu (Activation)	(None, 8, 8, 512)	0	conv4_block9_0_bn[0][0]
conv4_block9_1_conv (Conv2D)	(None, 8, 8, 128)	65,536	conv4_block9_0_relu[0][0
conv4_block9_1_bn (BatchNormalization)	(None, 8, 8, 128)	512	conv4_block9_1_conv[0][0
conv4_block9_1_relu (Activation)	(None, 8, 8, 128)	0	conv4_block9_1_bn[0][0]
conv4_block9_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block9_1_relu[0][0
conv4_block9_concat (Concatenate)	(None, 8, 8, 544)	0	conv4_block8_concat[0][0 conv4_block9_2_conv[0][0
conv4_block10_0_bn (BatchNormalization)	(None, 8, 8, 544)	2,176	conv4_block9_concat[0][0
conv4_block10_0_relu (Activation)	(None, 8, 8, 544)	0	conv4_block10_0_bn[0][0]
conv4_block10_1_conv (Conv2D)	(None, 8, 8, 128)	69,632	conv4_block10_0_relu[0][
conv4_block10_1_bn (BatchNormalization)	(None, 8, 8, 128)	512	conv4_block10_1_conv[0][
conv4_block10_1_relu (Activation)	(None, 8, 8, 128)	0	conv4_block10_1_bn[0][0]
conv4_block10_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block10_1_relu[0][
conv4_block10_concat (Concatenate)	(None, 8, 8, 576)	0	conv4_block9_concat[0][0 conv4_block10_2_conv[0][
conv4_block11_0_bn (BatchNormalization)	(None, 8, 8, 576)	2,304	conv4_block10_concat[0][
conv4_block11_0_relu (Activation)	(None, 8, 8, 576)	0	conv4_block11_0_bn[0][0]
conv4_block11_1_conv (Conv2D)	(None, 8, 8, 128)	73,728	conv4_block11_0_relu[0][
conv4_block11_1_bn (BatchNormalization)	(None, 8, 8, 128)	512	conv4_block11_1_conv[0][
conv4_block11_1_relu (Activation)	(None, 8, 8, 128)	0	conv4_block11_1_bn[0][0]
conv4_block11_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block11_1_relu[0][
conv4_block11_concat (Concatenate)	(None, 8, 8, 608)	0	conv4_block10_concat[0][conv4_block11_2_conv[0][
conv4_block12_0_bn (BatchNormalization)	(None, 8, 8, 608)	2,432	conv4_block11_concat[0][
conv4_block12_0_relu (Activation)	(None, 8, 8, 608)	0	conv4_block12_0_bn[0][0]

<pre>conv4_block12_1_conv (Conv2D) conv4_block12_1_bn (BatchNormalization)</pre>		77,824	conv4_block12_0_relu[0][
	(None 0 0 120)		
(Baccintormacizacion)	(None, 8, 8, 128)	512	conv4_block12_1_conv[0][
conv4_block12_1_relu (Activation)	(None, 8, 8, 128)	0	conv4_block12_1_bn[0][0]
conv4_block12_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block12_1_relu[0][
<pre>conv4_block12_concat (Concatenate)</pre>	(None, 8, 8, 640)	0	conv4_block11_concat[0][conv4_block12_2_conv[0][
conv4_block13_0_bn (BatchNormalization)	(None, 8, 8, 640)	2,560	conv4_block12_concat[0][
conv4_block13_0_relu (Activation)	(None, 8, 8, 640)	0	conv4_block13_0_bn[0][0]
conv4_block13_1_conv (Conv2D)	(None, 8, 8, 128)	81,920	conv4_block13_0_relu[0][
<pre>conv4_block13_1_bn (BatchNormalization)</pre>	(None, 8, 8, 128)	512	conv4_block13_1_conv[0][
conv4_block13_1_relu (Activation)	(None, 8, 8, 128)	0	conv4_block13_1_bn[0][0]
conv4_block13_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block13_1_relu[0][
<pre>conv4_block13_concat (Concatenate)</pre>	(None, 8, 8, 672)	0	conv4_block12_concat[0][conv4_block13_2_conv[0][
conv4_block14_0_bn (BatchNormalization)	(None, 8, 8, 672)	2,688	conv4_block13_concat[0][
conv4_block14_0_relu (Activation)	(None, 8, 8, 672)	0	conv4_block14_0_bn[0][0]
conv4_block14_1_conv (Conv2D)	(None, 8, 8, 128)	86,016	conv4_block14_0_relu[0][
<pre>conv4_block14_1_bn (BatchNormalization)</pre>	(None, 8, 8, 128)	512	conv4_block14_1_conv[0][
conv4_block14_1_relu (Activation)	(None, 8, 8, 128)	0	conv4_block14_1_bn[0][0]
conv4_block14_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block14_1_relu[0][
<pre>conv4_block14_concat (Concatenate)</pre>	(None, 8, 8, 704)	0	conv4_block13_concat[0][conv4_block14_2_conv[0][
conv4_block15_0_bn (BatchNormalization)	(None, 8, 8, 704)	2,816	conv4_block14_concat[0][
conv4_block15_0_relu (Activation)	(None, 8, 8, 704)	0	conv4_block15_0_bn[0][0]
conv4_block15_1_conv (Conv2D)	(None, 8, 8, 128)	90,112	conv4_block15_0_relu[0][
<pre>conv4_block15_1_bn (BatchNormalization)</pre>	(None, 8, 8, 128)	512	conv4_block15_1_conv[0][
<pre>conv4_block15_1_relu (Activation)</pre>	(None, 8, 8, 128)	0	conv4_block15_1_bn[0][0]
conv4_block15_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block15_1_relu[0][
<pre>conv4_block15_concat (Concatenate)</pre>	(None, 8, 8, 736)	0	conv4_block14_concat[0][conv4_block15_2_conv[0][
conv4_block16_0_bn (BatchNormalization)	(None, 8, 8, 736)	2,944	conv4_block15_concat[0][
conv4_block16_0_relu (Activation)	(None, 8, 8, 736)	0	conv4_block16_0_bn[0][0]
conv4_block16_1_conv (Conv2D)	(None, 8, 8, 128)	94,208	conv4_block16_0_relu[0][
conv4_block16_1_bn (BatchNormalization)	(None, 8, 8, 128)	512	conv4_block16_1_conv[0][
conv4_block16_1_relu	(None, 8, 8, 128)	Θ	conv4_block16_1_bn[0][0]

Conv4_block16_concat (None, 8, 8, 768)	(Activation)			
Conn4 block17 0 bn (None, 8, 8, 768) 3,872 conv4_block16 concat[0] (Batchbormalization) (None, 8, 8, 768) 3,872 conv4_block16 concat[0] (Conv4_block17_0_relu (None, 8, 8, 768) 0 conv4_block17_0_relu (None, 8, 8, 128) 0 conv4_block17_0_relu[0] (Conv4_block17_1_conv (Conv20) (None, 8, 8, 128) 0 conv4_block17_1_relu[0] (Conv4_block17_1_relu (None, 8, 8, 128) 0 conv4_block17_1_relu[0] (Conv4_block17_1_relu (None, 8, 8, 128) 0 conv4_block17_1_relu[0] (Conv4_block17_1_relu (None, 8, 8, 32) 36,864 conv4_block17_1_relu[0] (Conv4_block17_1_concat (None, 8, 8, 888) 0 conv4_block17_1_relu[0] (Conv4_block17_concat (None, 8, 8, 888) 0 conv4_block18_0_conv4_block19_0_conv4_block20_0_conv4_block20_0_conv4_block20_0_conv4_block20_0_conv4_bloc	conv4_block16_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block16_1_relu[0][
		(None, 8, 8, 768)	0	conv4_block15_concat[0][conv4_block16_2_conv[0][
Conv4 block17 1 conv (Conv2D) (None, 8, 8, 128) 98,394 conv4 block17 0 retu[0]		(None, 8, 8, 768)	3,072	conv4_block16_concat[0][
Conv4_block17 1 bn (BatchNormalization)		(None, 8, 8, 768)	0	conv4_block17_0_bn[0][0]
(BatchNormalization)	conv4_block17_1_conv (Conv2D)	(None, 8, 8, 128)	98,304	conv4_block17_0_relu[0][
CACTIVATION CONV4_block17_2_conv (Conv2D) (None, 8, 8, 82) 36,864 conv4_block17_1_relu[8] conv4_block17_2_convat (None, 8, 8, 888) 8 conv4_block16_concat[8] conv4_block18_0_bn (None, 8, 8, 888) 8 conv4_block17_2_convat (None, 8, 8, 888) 3,288 conv4_block17_2_convat (None, 8, 8, 888) 3,288 conv4_block18_0_bn[8][8] (Conv4_block18_0_relu (None, 8, 8, 888) 0 conv4_block18_0_bn[8][8] (Conv4_block18_1_conv (Conv2D) (None, 8, 8, 128) 182,488 conv4_block18_1_convat (None, 8, 8, 128) conv4_block18_1_convat (None, 8, 8, 32) conv4_block19_0_relu (None, 8, 8, 32) conv4_block19_0_relu (None, 8, 8, 32) conv4_block19_1_relu (None, 8, 8, 32) conv4_block29_1_renu(8) conv4_block29_0_relu (None, 8, 8, 32) conv4_block29_0_renu(10_renu4_block29_0_relu (None, 8, 8, 32) conv4_block29_0_relu (None, 8, 8,		(None, 8, 8, 128)	512	conv4_block17_1_conv[0][
Conv4_block17_concat (None, 8, 8, 888)		(None, 8, 8, 128)	0	conv4_block17_1_bn[0][0]
Conv4_block18_0_bn (None, 8, 8, 800) 3,200 conv4_block17_2_conv[6]	conv4_block17_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block17_1_relu[0][
(BatchNormalization) Conv4 block18 0 celu (Activation) (None, 8, 8, 800) 0 conv4_block18_0_bn[0][0 (Activation)] conv4_block18_1_conv (Conv2D) (None, 8, 8, 128) 102,400 conv4_block18_0_relu[0] conv4_block18_1_bn (BatchNormalization) (None, 8, 8, 128) 512 conv4_block18_1_conv[0] conv4_block18_1_relu (Activation) (None, 8, 8, 128) 0 conv4_block18_1_bn[0][0 conv4_block18_2_conv (Conv2D) (None, 8, 8, 32) 36,864 conv4_block18_1_relu[0] conv4_block18_concat (Concatenate) (None, 8, 8, 832) 0 conv4_block17_concat[0] conv4_block19_0 bn (BatchNormalization) (None, 8, 8, 832) 3,328 conv4_block19_obn[0][0 conv4_block19_0 relu (Activation) (None, 8, 8, 128) 106,496 conv4_block19_0_relu[0] conv4_block19_1_conv (Conv2D) (None, 8, 8, 128) 106,496 conv4_block19_1_conv[0] conv4_block19_1_relu (Activation) (None, 8, 8, 128) 512 conv4_block19_1_conv[0] conv4_block19_1_relu (Activation) (None, 8, 8, 32) 36,864 conv4_block19_1_relu[0] conv4_block19_1_relu (Activation) (None, 8, 8, 32) 36,864 conv4_block19_1_relu[0] conv4_block20_0_bn (BatchNormalization) (None, 8, 8, 32) 36,864 conv4_block19_1_relu[0] <td< td=""><td></td><td>(None, 8, 8, 800)</td><td>0</td><td>conv4_block16_concat[0][conv4_block17_2_conv[0][</td></td<>		(None, 8, 8, 800)	0	conv4_block16_concat[0][conv4_block17_2_conv[0][
(Activation) conv4_block18_1_conv (Conv2D) (None, 8, 8, 128) 102,400 conv4_block18_0_relu[0] conv4_block18_1_bn (BatchNormalization) (None, 8, 8, 128) 512 conv4_block18_1_conv[0] conv4_block18_1_relu (Activation) (None, 8, 8, 128) 0 conv4_block18_1_bn[0][0] conv4_block18_2_conv (Conv2D) (None, 8, 8, 32) 36,864 conv4_block18_1_relu[0] conv4_block18_concat (Concatenate) (None, 8, 8, 832) 0 conv4_block18_1_relu[0] conv4_block19_0_bn (BatchNormalization) (None, 8, 8, 832) 3,328 conv4_block18_concat[0] conv4_block19_0_br (BatchNormalization) (None, 8, 8, 832) 0 conv4_block19_0_bn[0][0 conv4_block19_1_bn (BatchNormalization) (None, 8, 8, 128) 106,496 conv4_block19_1_relu[0] conv4_block19_1_relu (Activation) (None, 8, 8, 128) 512 conv4_block19_1_relu[0] conv4_block19_1_relu (Activation) (None, 8, 8, 32) 36,864 conv4_block19_1_relu[0] conv4_block20_0_bn (BatchNormalization) (None, 8, 8, 32) 36,864 conv4_block19_1_relu[0] conv4_block20_0_bn (BatchNormalization) (None, 8, 8, 864) 0 conv4_block		(None, 8, 8, 800)	3,200	conv4_block17_concat[0][
conv4_block18_1_bn (BatchNormalization) (None, 8, 8, 128) 512 conv4_block18_1_conv[0] conv4_block18_1_relu (Activation) (None, 8, 8, 128) 0 conv4_block18_1_bn[0][0 conv4_block18_2_conv (Conv2D) (None, 8, 8, 32) 36,864 conv4_block18_1_relu[0] conv4_block18_concat (Concatenate) (None, 8, 8, 832) 0 conv4_block17_concat[0] conv4_block19_0_bn (BatchNormalization) conv4_block19_0_bn (BatchNormalization) (None, 8, 8, 832) 3,328 conv4_block18_concat[0] conv4_block19_0_relu (Activation) (None, 8, 8, 128) 0 conv4_block19_0_bn[0][0 conv4_block19_1_conv (Conv2D) (None, 8, 8, 128) 106,496 conv4_block19_0_relu[0] conv4_block19_1_bn (BatchNormalization) (None, 8, 8, 128) 512 conv4_block19_1_conv[0] conv4_block19_1_relu (Activation) (None, 8, 8, 32) 36,864 conv4_block19_1_bn[0][0 conv4_block19_2_conv (BatchNormalization) (None, 8, 8, 864) 0 conv4_block19_1_relu[0] conv4_block20_0_bn (BatchNormalization) (None, 8, 8, 864) 0 conv4_block20_0_bn[0][0 conv4_block20_0_relu (Activation) (None, 8, 8, 864) 0 conv4_block20_0_		(None, 8, 8, 800)	0	conv4_block18_0_bn[0][0]
(BatchNormalization) Conv4_block18_1_relu (None, 8, 8, 128) 0 conv4_block18_1_bn[0][0] conv4_block18_2_conv (Conv2D) (None, 8, 8, 32) 36,864 conv4_block18_1_relu[0] conv4_block18_concat (Concatenate) (None, 8, 8, 832) 0 conv4_block17_concat[0] conv4_block18_2_conv[0] conv4_block19_0_bn (BatchNormalization) (None, 8, 8, 832) 3,328 conv4_block18_concat[0] conv4_block19_0_relu (Activation) (None, 8, 8, 832) 0 conv4_block19_0_bn[0][0 conv4_block19_1_conv (Conv2D) (None, 8, 8, 128) 106,496 conv4_block19_0_relu[0] conv4_block19_1_bn (BatchNormalization) (None, 8, 8, 128) 512 conv4_block19_1_conv[0] conv4_block19_1_relu (Activation) (None, 8, 8, 32) 36,864 conv4_block19_1_bn[0][0 conv4_block19_2_conv (Conv2D) (None, 8, 8, 32) 36,864 conv4_block19_1_relu[0] conv4_block19_concat (Concatenate) (None, 8, 8, 864) 0 conv4_block18_concat[0] conv4_block20_0_bn (BatchNormalization) (None, 8, 8, 864) 0 conv4_block20_0_bn[0][0 conv4_block20_0_relu (Activation) (None, 8, 8, 864) 0 conv4_block20_0_bn[0][0 conv4_block20_1_conv (Conv2D) (None, 8, 8, 128) 110,592 conv4_block20_0_relu[0] conv4_block20_1_bn	conv4_block18_1_conv (Conv2D)	(None, 8, 8, 128)	102,400	conv4_block18_0_relu[0][
(Activation) conv4_block18_2_conv (Conv2D) (None, 8, 8, 32) 36,864 conv4_block18_1_relu[0] conv4_block18_concat (Concatenate) (None, 8, 8, 832) 0 conv4_block17_concat[0] conv4_block19_0_bn (BatchNormalization) (None, 8, 8, 832) 3,328 conv4_block18_concat[0] conv4_block19_0_relu (Activation) (None, 8, 8, 832) 0 conv4_block19_0_bn[0][0 conv4_block19_1_conv (Conv2D) (None, 8, 8, 128) 106,496 conv4_block19_0_relu[0] conv4_block19_1_bn (BatchNormalization) (None, 8, 8, 128) 512 conv4_block19_1_conv[0] conv4_block19_1_relu (Activation) (None, 8, 8, 128) 0 conv4_block19_1_bn[0][0 conv4_block19_2_conv (Conv2D) (None, 8, 8, 82) 36,864 conv4_block19_1_relu[0] conv4_block19_concat (Concatenate) (None, 8, 8, 864) 0 conv4_block19_concat[0] conv4_block20_0_bn (BatchNormalization) (None, 8, 8, 864) 3,456 conv4_block19_concat[0] conv4_block20_0_relu (Activation) (None, 8, 8, 8128) 110,592 conv4_block20_0_relu[0] conv4_block20_1_bn (None, 8, 8, 128) 110,592 conv4_block20_1_conv[0]		(None, 8, 8, 128)	512	conv4_block18_1_conv[0][
conv4_block18_concat (Concatenate) (None, 8, 8, 832) 0 conv4_block17_concat[0] conv4_block18_2_conv[0] conv4_block19_0_bn (BatchNormalization) (None, 8, 8, 832) 3,328 conv4_block18_concat[0] conv4_block19_0_relu (Activation) (None, 8, 8, 832) 0 conv4_block19_0_bn[0][0 0 conv4_block19_0_relu[0] conv4_block19_1_conv (Conv2D) (None, 8, 8, 128) 106,496 conv4_block19_0_relu[0] conv4_block19_1_conv (Conv2D) (None, 8, 8, 128) 512 conv4_block19_1_conv[0] conv4_block19_1_relu (Activation) (None, 8, 8, 128) 0 conv4_block19_1_bn[0][0 conv4_block19_2_conv (Conv2D) (None, 8, 8, 32) 36,864 conv4_block19_1_relu[0] conv4_block19_concat (Concatenate) (None, 8, 8, 864) 0 conv4_block18_concat[0] conv4_block20_0_bn (BatchNormalization) (None, 8, 8, 864) 3,456 conv4_block19_concat[0] conv4_block20_0_relu (Activation) (None, 8, 8, 864) 0 conv4_block20_0_bn[0][0 conv4_block20_1_conv (Conv2D) (None, 8, 8, 128) 110,592 conv4_block20_0_relu[0] conv4_block20_1_bn (None, 8, 8, 128) 512 conv4_block20_1_conv[0]		(None, 8, 8, 128)	0	conv4_block18_1_bn[0][0]
(Concatenate) conv4_block18_2_conv[0] conv4_block19_0_bn (BatchNormalization) (None, 8, 8, 832) 3,328 conv4_block18_concat[0] conv4_block19_0_relu (Activation) (None, 8, 8, 832) 0 conv4_block19_0_bn[0][0 conv4_block19_1_conv (Conv2D) (None, 8, 8, 128) 106,496 conv4_block19_0_relu[0] conv4_block19_1_bn (BatchNormalization) (None, 8, 8, 128) 512 conv4_block19_1_conv[0] conv4_block19_1_relu (Activation) (None, 8, 8, 128) 0 conv4_block19_1_bn[0][0 conv4_block19_2_conv (Conv2D) (None, 8, 8, 32) 36,864 conv4_block19_1_relu[0] conv4_block19_concat (Concatenate) (None, 8, 8, 864) 0 conv4_block18_concat[0] conv4_block20_0_bn (BatchNormalization) (None, 8, 8, 864) 3,456 conv4_block19_concat[0] conv4_block20_0_relu (Activation) (None, 8, 8, 864) 0 conv4_block20_0_bn[0][0 conv4_block20_1_conv (Conv2D) (None, 8, 8, 128) 110,592 conv4_block20_0_relu[0] conv4_block20_1_bn (None, 8, 8, 128) 512 conv4_block20_1_conv[0]	conv4_block18_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block18_1_relu[0][
(BatchNormalization) (None, 8, 8, 832) 0 conv4_block19_0_relu (Activation) conv4_block19_1_conv (Conv2D) (None, 8, 8, 128) 106,496 conv4_block19_0_relu[0] conv4_block19_1_bn (BatchNormalization) (None, 8, 8, 128) 512 conv4_block19_1_conv[0] conv4_block19_1_relu (Activation) (None, 8, 8, 128) 0 conv4_block19_1_bn[0][0 conv4_block19_2_conv (Conv2D) (None, 8, 8, 32) 36,864 conv4_block19_1_relu[0] conv4_block19_concat (Concatenate) (None, 8, 8, 864) 0 conv4_block18_concat[0] conv4_block20_0_bn (BatchNormalization) (None, 8, 8, 864) 3,456 conv4_block19_concat[0] conv4_block20_0_relu (Activation) (None, 8, 8, 864) 0 conv4_block20_0_bn[0][0 conv4_block20_1_conv (Conv2D) (None, 8, 8, 128) 110,592 conv4_block20_0_relu[0] conv4_block20_1_bn (None, 8, 8, 128) 512 conv4_block20_1_conv[0]		(None, 8, 8, 832)	Θ	conv4_block17_concat[0][conv4_block18_2_conv[0][
(Activation) conv4_block19_1_conv (Conv2D) (None, 8, 8, 128) 106,496 conv4_block19_0_relu[0] conv4_block19_1_bn (BatchNormalization) (None, 8, 8, 128) 512 conv4_block19_1_conv[0] conv4_block19_1_relu (Activation) (None, 8, 8, 128) 0 conv4_block19_1_bn[0][0] conv4_block19_2_conv (Conv2D) (None, 8, 8, 32) 36,864 conv4_block19_1_relu[0] conv4_block19_concat (Concatenate) (None, 8, 8, 864) 0 conv4_block18_concat[0] conv4_block20_0_bn (BatchNormalization) (None, 8, 8, 864) 3,456 conv4_block19_concat[0] conv4_block20_0_relu (Activation) (None, 8, 8, 864) 0 conv4_block20_0_bn[0][0 conv4_block20_1_conv (Conv2D) (None, 8, 8, 128) 110,592 conv4_block20_0_relu[0] conv4_block20_1_bn (None, 8, 8, 128) 512 conv4_block20_1_conv[0]		(None, 8, 8, 832)	3,328	conv4_block18_concat[0][
conv4_block19_1_bn (BatchNormalization) (None, 8, 8, 128) 512 conv4_block19_1_conv[0] conv4_block19_1_relu (Activation) (None, 8, 8, 128) 0 conv4_block19_1_bn[0][0 conv4_block19_2_conv (Conv2D) (None, 8, 8, 32) 36,864 conv4_block19_1_relu[0] conv4_block19_concat (Concatenate) (None, 8, 8, 864) 0 conv4_block18_concat[0] conv4_block20_0_bn (BatchNormalization) (None, 8, 8, 864) 3,456 conv4_block19_concat[0] conv4_block20_0_relu (Activation) (None, 8, 8, 864) 0 conv4_block20_0_bn[0][0 conv4_block20_1_conv (Conv2D) (None, 8, 8, 128) 110,592 conv4_block20_0_relu[0] conv4_block20_1_bn (None, 8, 8, 128) 512 conv4_block20_1_conv[0]		(None, 8, 8, 832)	0	conv4_block19_0_bn[0][0]
(BatchNormalization) (None, 8, 8, 128) 0 conv4_block19_1_bn[0][0 conv4_block19_1_relu (None, 8, 8, 32) 36,864 conv4_block19_1_relu[0] conv4_block19_concat (None, 8, 8, 864) 0 conv4_block18_concat[0] (Concatenate) (None, 8, 8, 864) 3,456 conv4_block19_concat[0] conv4_block20_0_bn (None, 8, 8, 864) 3,456 conv4_block19_concat[0] conv4_block20_0_relu (None, 8, 8, 864) 0 conv4_block20_0_bn[0][0 conv4_block20_1_conv (Conv2D) (None, 8, 8, 128) 110,592 conv4_block20_0_relu[0] conv4_block20_1_bn (None, 8, 8, 128) 512 conv4_block20_1_conv[0]	conv4_block19_1_conv (Conv2D)	(None, 8, 8, 128)	106,496	conv4_block19_0_relu[0][
(Activation) conv4_block19_2_conv (Conv2D) (None, 8, 8, 32) 36,864 conv4_block19_1_relu[0] conv4_block19_concat (Concatenate) (None, 8, 8, 864) 0 conv4_block18_concat[0] conv4_block19_2_conv[0] conv4_block20_0_bn (BatchNormalization) (None, 8, 8, 864) 3,456 conv4_block19_concat[0] conv4_block20_0_relu (Activation) (None, 8, 8, 864) 0 conv4_block20_0_bn[0][0] conv4_block20_1_conv (Conv2D) (None, 8, 8, 128) 110,592 conv4_block20_0_relu[0] conv4_block20_1_bn (None, 8, 8, 128) 512 conv4_block20_1_conv[0]		(None, 8, 8, 128)	512	conv4_block19_1_conv[0][
conv4_block19_concat (Concatenate) (None, 8, 8, 864) 0 conv4_block18_concat[0] conv4_block19_2_conv[0] conv4_block20_0_bn (BatchNormalization) (None, 8, 8, 864) 3,456 conv4_block19_concat[0] conv4_block20_0_relu (Activation) (None, 8, 8, 864) 0 conv4_block20_0_bn[0][0] conv4_block20_1_conv (Conv2D) (None, 8, 8, 128) 110,592 conv4_block20_0_relu[0] conv4_block20_1_bn (None, 8, 8, 128) 512 conv4_block20_1_conv[0]		(None, 8, 8, 128)	0	conv4_block19_1_bn[0][0]
(Concatenate) conv4_block19_2_conv[0] conv4_block20_0_bn (BatchNormalization) (None, 8, 8, 864) 3,456 conv4_block19_concat[0] conv4_block20_0_relu (Activation) (None, 8, 8, 864) 0 conv4_block20_0_bn[0][0 conv4_block20_1_conv (Conv2D) (None, 8, 8, 128) 110,592 conv4_block20_0_relu[0] conv4_block20_1_bn (None, 8, 8, 128) 512 conv4_block20_1_conv[0]	conv4_block19_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block19_1_relu[0][
(BatchNormalization) (None, 8, 8, 864) 0 conv4_block20_0_bn[0][0 (Activation) conv4_block20_1_conv (Conv2D) (None, 8, 8, 128) 110,592 conv4_block20_0_relu[0] conv4_block20_1_bn (None, 8, 8, 128) 512 conv4_block20_1_conv[0]		(None, 8, 8, 864)	0	<pre>conv4_block18_concat[0][conv4_block19_2_conv[0][</pre>
(Activation) conv4_block20_1_conv (Conv2D) (None, 8, 8, 128) 110,592 conv4_block20_0_relu[0] conv4_block20_1_bn (None, 8, 8, 128) 512 conv4_block20_1_conv[0]		(None, 8, 8, 864)	3,456	conv4_block19_concat[0][
conv4_block20_1_bn (None, 8, 8, 128) 512 conv4_block20_1_conv[0]		(None, 8, 8, 864)	0	conv4_block20_0_bn[0][0]
	conv4_block20_1_conv (Conv2D)	(None, 8, 8, 128)	110,592	conv4_block20_0_relu[0][
(223	conv4_block20_1_bn (BatchNormalization)	(None, 8, 8, 128)	512	conv4_block20_1_conv[0][
conv4_block20_1_relu (None, 8, 8, 128) 0 conv4_block20_1_bn[0][0 (Activation) 0 conv4_block20_1_bn[0][0		(None, 8, 8, 128)	0	conv4_block20_1_bn[0][0]
conv4_block20_2_conv (Conv2D) (None, 8, 8, 32) 36,864 conv4_block20_1_relu[0]	conv4_block20_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block20_1_relu[0][
		(None, 8, 8, 896)	0	conv4_block19_concat[0][conv4_block20_2_conv[0][

conv4_block21_0_bn (BatchNormalization)	(None, 8, 8, 896)	3,584	conv4_block20_concat[0][
conv4_block21_0_relu (Activation)	(None, 8, 8, 896)	0	conv4_block21_0_bn[0][0]
conv4_block21_1_conv (Conv2D)	(None, 8, 8, 128)	114,688	conv4_block21_0_relu[0][
conv4_block21_1_bn (BatchNormalization)	(None, 8, 8, 128)	512	conv4_block21_1_conv[0][
conv4_block21_1_relu (Activation)	(None, 8, 8, 128)	0	conv4_block21_1_bn[0][0]
conv4_block21_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block21_1_relu[0][
conv4_block21_concat (Concatenate)	(None, 8, 8, 928)	0	conv4_block20_concat[0][conv4_block21_2_conv[0][
conv4_block22_0_bn (BatchNormalization)	(None, 8, 8, 928)	3,712	conv4_block21_concat[0][
conv4_block22_0_relu (Activation)	(None, 8, 8, 928)	0	conv4_block22_0_bn[0][0]
conv4_block22_1_conv (Conv2D)	(None, 8, 8, 128)	118,784	conv4_block22_0_relu[0][
conv4_block22_1_bn (BatchNormalization)	(None, 8, 8, 128)	512	conv4_block22_1_conv[0][
conv4_block22_1_relu (Activation)	(None, 8, 8, 128)	0	conv4_block22_1_bn[0][0]
conv4_block22_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block22_1_relu[0][
conv4_block22_concat (Concatenate)	(None, 8, 8, 960)	0	conv4_block21_concat[0][conv4_block22_2_conv[0][
conv4_block23_0_bn (BatchNormalization)	(None, 8, 8, 960)	3,840	conv4_block22_concat[0][
conv4_block23_0_relu (Activation)	(None, 8, 8, 960)	0	conv4_block23_0_bn[0][0]
conv4_block23_1_conv (Conv2D)	(None, 8, 8, 128)	122,880	conv4_block23_0_relu[0][
conv4_block23_1_bn (BatchNormalization)	(None, 8, 8, 128)	512	conv4_block23_1_conv[0][
conv4_block23_1_relu (Activation)	(None, 8, 8, 128)	0	conv4_block23_1_bn[0][0]
conv4_block23_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block23_1_relu[0][
conv4_block23_concat (Concatenate)	(None, 8, 8, 992)	0	conv4_block22_concat[0][conv4_block23_2_conv[0][
conv4_block24_0_bn (BatchNormalization)	(None, 8, 8, 992)	3,968	conv4_block23_concat[0][
conv4_block24_0_relu (Activation)	(None, 8, 8, 992)	0	conv4_block24_0_bn[0][0]
conv4_block24_1_conv (Conv2D)	(None, 8, 8, 128)	126,976	conv4_block24_0_relu[0][
conv4_block24_1_bn (BatchNormalization)	(None, 8, 8, 128)	512	conv4_block24_1_conv[0][
conv4_block24_1_relu (Activation)	(None, 8, 8, 128)	0	conv4_block24_1_bn[0][0]
conv4_block24_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block24_1_relu[0][
conv4_block24_concat (Concatenate)	(None, 8, 8, 1024)	0	conv4_block23_concat[0][conv4_block24_2_conv[0][
conv4_block25_0_bn (BatchNormalization)	(None, 8, 8, 1024)	4,096	conv4_block24_concat[0][
conv4_block25_0_relu (Activation)	(None, 8, 8, 1024)	0	conv4_block25_0_bn[0][0]
conv4_block25_1_conv (Conv2D)	(None, 8, 8, 128)	131,072	conv4_block25_0_relu[0][

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conv4_block25_1_bn (BatchNormalization)	(None, 8, 8, 128)	512	conv4_block25_1_conv[0][
conv4_block25_1_relu (Activation)	(None, 8, 8, 128)	0	conv4_block25_1_bn[0][0]
conv4_block25_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block25_1_relu[0][
conv4_block25_concat (Concatenate)	(None, 8, 8, 1056)	0	conv4_block24_concat[0][conv4_block25_2_conv[0][
conv4_block26_0_bn (BatchNormalization)	(None, 8, 8, 1056)	4,224	conv4_block25_concat[0][
conv4_block26_0_relu (Activation)	(None, 8, 8, 1056)	0	conv4_block26_0_bn[0][0]
conv4_block26_1_conv (Conv2D)	(None, 8, 8, 128)	135,168	conv4_block26_0_relu[0][
conv4_block26_1_bn (BatchNormalization)	(None, 8, 8, 128)	512	conv4_block26_1_conv[0][
conv4_block26_1_relu (Activation)	(None, 8, 8, 128)	0	conv4_block26_1_bn[0][0]
conv4_block26_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block26_1_relu[0][
conv4_block26_concat (Concatenate)	(None, 8, 8, 1088)	0	conv4_block25_concat[0][conv4_block26_2_conv[0][
conv4_block27_0_bn (BatchNormalization)	(None, 8, 8, 1088)	4,352	conv4_block26_concat[0][
conv4_block27_0_relu (Activation)	(None, 8, 8, 1088)	0	conv4_block27_0_bn[0][0]
conv4_block27_1_conv (Conv2D)	(None, 8, 8, 128)	139,264	conv4_block27_0_relu[0][
conv4_block27_1_bn (BatchNormalization)	(None, 8, 8, 128)	512	conv4_block27_1_conv[0][
conv4_block27_1_relu (Activation)	(None, 8, 8, 128)	0	conv4_block27_1_bn[0][0]
conv4_block27_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block27_1_relu[0][
conv4_block27_concat (Concatenate)	(None, 8, 8, 1120)	0	conv4_block26_concat[0] conv4_block27_2_conv[0]
conv4_block28_0_bn (BatchNormalization)	(None, 8, 8, 1120)	4,480	conv4_block27_concat[0][
conv4_block28_0_relu (Activation)	(None, 8, 8, 1120)	0	conv4_block28_0_bn[0][0]
conv4_block28_1_conv (Conv2D)	(None, 8, 8, 128)	143,360	conv4_block28_0_relu[0][
conv4_block28_1_bn (BatchNormalization)	(None, 8, 8, 128)	512	conv4_block28_1_conv[0][
conv4_block28_1_relu (Activation)	(None, 8, 8, 128)	0	conv4_block28_1_bn[0][0]
conv4_block28_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block28_1_relu[0][
conv4_block28_concat (Concatenate)	(None, 8, 8, 1152)	0	conv4_block27_concat[0][conv4_block28_2_conv[0][
conv4_block29_0_bn (BatchNormalization)	(None, 8, 8, 1152)	4,608	conv4_block28_concat[0][
conv4_block29_0_relu (Activation)	(None, 8, 8, 1152)	0	conv4_block29_0_bn[0][0]
conv4_block29_1_conv (Conv2D)	(None, 8, 8, 128)	147,456	conv4_block29_0_relu[0][
conv4_block29_1_bn (BatchNormalization)	(None, 8, 8, 128)	512	conv4_block29_1_conv[0][
conv4_block29_1_relu (Activation)	(None, 8, 8, 128)	0	conv4_block29_1_bn[0][0]
 	 	 	

conv4_block29_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block29_1_relu[0][
conv4_block29_concat (Concatenate)	(None, 8, 8, 1184)	0	conv4_block28_concat[0][conv4_block29_2_conv[0][
conv4_block30_0_bn (BatchNormalization)	(None, 8, 8, 1184)	4,736	conv4_block29_concat[0][
conv4_block30_0_relu (Activation)	(None, 8, 8, 1184)	0	conv4_block30_0_bn[0][0]
conv4_block30_1_conv (Conv2D)	(None, 8, 8, 128)	151,552	conv4_block30_0_relu[0][
conv4_block30_1_bn (BatchNormalization)	(None, 8, 8, 128)	512	conv4_block30_1_conv[0][
conv4_block30_1_relu (Activation)	(None, 8, 8, 128)	0	conv4_block30_1_bn[0][0]
conv4_block30_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block30_1_relu[0][
conv4_block30_concat (Concatenate)	(None, 8, 8, 1216)	0	<pre>conv4_block29_concat[0][conv4_block30_2_conv[0][</pre>
conv4_block31_0_bn (BatchNormalization)	(None, 8, 8, 1216)	4,864	conv4_block30_concat[0][
conv4_block31_0_relu (Activation)	(None, 8, 8, 1216)	0	conv4_block31_0_bn[0][0]
conv4_block31_1_conv (Conv2D)	(None, 8, 8, 128)	155,648	conv4_block31_0_relu[0][
conv4_block31_1_bn (BatchNormalization)	(None, 8, 8, 128)	512	conv4_block31_1_conv[0][
conv4_block31_1_relu (Activation)	(None, 8, 8, 128)	0	conv4_block31_1_bn[0][0]
conv4_block31_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block31_1_relu[0][
conv4_block31_concat (Concatenate)	(None, 8, 8, 1248)	0	<pre>conv4_block30_concat[0][conv4_block31_2_conv[0][</pre>
conv4_block32_0_bn (BatchNormalization)	(None, 8, 8, 1248)	4,992	conv4_block31_concat[0][
conv4_block32_0_relu (Activation)	(None, 8, 8, 1248)	0	conv4_block32_0_bn[0][0]
conv4_block32_1_conv (Conv2D)	(None, 8, 8, 128)	159,744	conv4_block32_0_relu[0][
conv4_block32_1_bn (BatchNormalization)	(None, 8, 8, 128)	512	conv4_block32_1_conv[0][
conv4_block32_1_relu (Activation)	(None, 8, 8, 128)	0	conv4_block32_1_bn[0][0]
conv4_block32_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block32_1_relu[0][
conv4_block32_concat (Concatenate)	(None, 8, 8, 1280)	0	<pre>conv4_block31_concat[0][conv4_block32_2_conv[0][</pre>
conv4_block33_0_bn (BatchNormalization)	(None, 8, 8, 1280)	5,120	conv4_block32_concat[0][
conv4_block33_0_relu (Activation)	(None, 8, 8, 1280)	0	conv4_block33_0_bn[0][0]
conv4_block33_1_conv (Conv2D)	(None, 8, 8, 128)	163,840	conv4_block33_0_relu[0][
conv4_block33_1_bn (BatchNormalization)	(None, 8, 8, 128)	512	conv4_block33_1_conv[0][
conv4_block33_1_relu (Activation)	(None, 8, 8, 128)	0	conv4_block33_1_bn[0][0]
conv4_block33_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block33_1_relu[0][
conv4_block33_concat (Concatenate)	(None, 8, 8, 1312)	0	<pre>conv4_block32_concat[0][conv4_block33_2_conv[0][</pre>
conv4_block34_0_bn (BatchNormalization)	(None, 8, 8, 1312)	5,248	conv4_block33_concat[0][

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conv4_block34_0_relu (Activation)	(None, 8, 8, 1312)	0	conv4_block34_0_bn[0][0]
conv4_block34_1_conv (Conv2D)	(None, 8, 8, 128)	167,936	conv4_block34_0_relu[0][
conv4_block34_1_bn (BatchNormalization)	(None, 8, 8, 128)	512	conv4_block34_1_conv[0][
conv4_block34_1_relu (Activation)	(None, 8, 8, 128)	0	conv4_block34_1_bn[0][0]
conv4_block34_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block34_1_relu[0][
conv4_block34_concat (Concatenate)	(None, 8, 8, 1344)	0	conv4_block33_concat[0][conv4_block34_2_conv[0][
conv4_block35_0_bn (BatchNormalization)	(None, 8, 8, 1344)	5,376	conv4_block34_concat[0][
conv4_block35_0_relu (Activation)	(None, 8, 8, 1344)	0	conv4_block35_0_bn[0][0]
conv4_block35_1_conv (Conv2D)	(None, 8, 8, 128)	172,032	conv4_block35_0_relu[0][
conv4_block35_1_bn (BatchNormalization)	(None, 8, 8, 128)	512	conv4_block35_1_conv[0][
conv4_block35_1_relu (Activation)	(None, 8, 8, 128)	0	conv4_block35_1_bn[0][0]
conv4_block35_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block35_1_relu[0][
conv4_block35_concat (Concatenate)	(None, 8, 8, 1376)	0	conv4_block34_concat[0][conv4_block35_2_conv[0][
conv4_block36_0_bn (BatchNormalization)	(None, 8, 8, 1376)	5,504	conv4_block35_concat[0][
conv4_block36_0_relu (Activation)	(None, 8, 8, 1376)	0	conv4_block36_0_bn[0][0]
conv4_block36_1_conv (Conv2D)	(None, 8, 8, 128)	176,128	conv4_block36_0_relu[0][
conv4_block36_1_bn (BatchNormalization)	(None, 8, 8, 128)	512	conv4_block36_1_conv[0][
conv4_block36_1_relu (Activation)	(None, 8, 8, 128)	0	conv4_block36_1_bn[0][0]
conv4_block36_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block36_1_relu[0][
conv4_block36_concat (Concatenate)	(None, 8, 8, 1408)	0	conv4_block35_concat[0][conv4_block36_2_conv[0][
conv4_block37_0_bn (BatchNormalization)	(None, 8, 8, 1408)	5,632	conv4_block36_concat[0][
conv4_block37_0_relu (Activation)	(None, 8, 8, 1408)	0	conv4_block37_0_bn[0][0]
conv4_block37_1_conv (Conv2D)	(None, 8, 8, 128)	180,224	conv4_block37_0_relu[0][
conv4_block37_1_bn (BatchNormalization)	(None, 8, 8, 128)	512	conv4_block37_1_conv[0][
conv4_block37_1_relu (Activation)	(None, 8, 8, 128)	0	conv4_block37_1_bn[0][0]
conv4_block37_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block37_1_relu[0][
conv4_block37_concat (Concatenate)	(None, 8, 8, 1440)	0	conv4_block36_concat[0][conv4_block37_2_conv[0][
conv4_block38_0_bn (BatchNormalization)	(None, 8, 8, 1440)	5,760	conv4_block37_concat[0][
conv4_block38_0_relu (Activation)	(None, 8, 8, 1440)	0	conv4_block38_0_bn[0][0]
conv4_block38_1_conv (Conv2D)	(None, 8, 8, 128)	184,320	conv4_block38_0_relu[0][
conv4_block38_1_bn	(None, 8, 8, 128)	512	conv4_block38_1_conv[0][

(BatchNormalization)			
conv4_block38_1_relu (Activation)	(None, 8, 8, 128)	0	conv4_block38_1_bn[0][0]
conv4_block38_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block38_1_relu[0][
<pre>conv4_block38_concat (Concatenate)</pre>	(None, 8, 8, 1472)	0	conv4_block37_concat[0][conv4_block38_2_conv[0][
conv4_block39_0_bn (BatchNormalization)	(None, 8, 8, 1472)	5,888	conv4_block38_concat[0][
conv4_block39_0_relu (Activation)	(None, 8, 8, 1472)	0	conv4_block39_0_bn[0][0]
conv4_block39_1_conv (Conv2D)	(None, 8, 8, 128)	188,416	conv4_block39_0_relu[0][
<pre>conv4_block39_1_bn (BatchNormalization)</pre>	(None, 8, 8, 128)	512	conv4_block39_1_conv[0][
conv4_block39_1_relu (Activation)	(None, 8, 8, 128)	0	conv4_block39_1_bn[0][0]
conv4_block39_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block39_1_relu[0][
<pre>conv4_block39_concat (Concatenate)</pre>	(None, 8, 8, 1504)	0	conv4_block38_concat[0][conv4_block39_2_conv[0][
conv4_block40_0_bn (BatchNormalization)	(None, 8, 8, 1504)	6,016	conv4_block39_concat[0][
conv4_block40_0_relu (Activation)	(None, 8, 8, 1504)	0	conv4_block40_0_bn[0][0]
conv4_block40_1_conv (Conv2D)	(None, 8, 8, 128)	192,512	conv4_block40_0_relu[0][
conv4_block40_1_bn (BatchNormalization)	(None, 8, 8, 128)	512	conv4_block40_1_conv[0][
conv4_block40_1_relu (Activation)	(None, 8, 8, 128)	0	conv4_block40_1_bn[0][0]
conv4_block40_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block40_1_relu[0][
<pre>conv4_block40_concat (Concatenate)</pre>	(None, 8, 8, 1536)	0	conv4_block39_concat[0][conv4_block40_2_conv[0][
<pre>conv4_block41_0_bn (BatchNormalization)</pre>	(None, 8, 8, 1536)	6,144	conv4_block40_concat[0][
<pre>conv4_block41_0_relu (Activation)</pre>	(None, 8, 8, 1536)	0	conv4_block41_0_bn[0][0]
conv4_block41_1_conv (Conv2D)	(None, 8, 8, 128)	196,608	conv4_block41_0_relu[0][
<pre>conv4_block41_1_bn (BatchNormalization)</pre>	(None, 8, 8, 128)	512	conv4_block41_1_conv[0][
conv4_block41_1_relu (Activation)	(None, 8, 8, 128)	0	conv4_block41_1_bn[0][0]
conv4_block41_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block41_1_relu[0][
<pre>conv4_block41_concat (Concatenate)</pre>	(None, 8, 8, 1568)	0	conv4_block40_concat[0][conv4_block41_2_conv[0][
conv4_block42_0_bn (BatchNormalization)	(None, 8, 8, 1568)	6,272	conv4_block41_concat[0][
conv4_block42_0_relu (Activation)	(None, 8, 8, 1568)	0	conv4_block42_0_bn[0][0]
conv4_block42_1_conv (Conv2D)	(None, 8, 8, 128)	200,704	conv4_block42_0_relu[0][
conv4_block42_1_bn (BatchNormalization)	(None, 8, 8, 128)	512	conv4_block42_1_conv[0][
conv4_block42_1_relu (Activation)	(None, 8, 8, 128)	0	conv4_block42_1_bn[0][0]
conv4_block42_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block42_1_relu[0][

conv4_block42_concat (Concatenate)	(None, 8, 8, 1600)	0	conv4_block41_concat[0][conv4_block42_2_conv[0][
conv4_block43_0_bn (BatchNormalization)	(None, 8, 8, 1600)	6,400	conv4_block42_concat[0][
conv4_block43_0_relu (Activation)	(None, 8, 8, 1600)	0	conv4_block43_0_bn[0][0]
conv4_block43_1_conv (Conv2D)	(None, 8, 8, 128)	204,800	conv4_block43_0_relu[0][
conv4_block43_1_bn (BatchNormalization)	(None, 8, 8, 128)	512	conv4_block43_1_conv[0][
conv4_block43_1_relu (Activation)	(None, 8, 8, 128)	0	conv4_block43_1_bn[0][0]
conv4_block43_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block43_1_relu[0][
conv4_block43_concat (Concatenate)	(None, 8, 8, 1632)	0	conv4_block42_concat[0][conv4_block43_2_conv[0][
conv4_block44_0_bn (BatchNormalization)	(None, 8, 8, 1632)	6,528	conv4_block43_concat[0][
conv4_block44_0_relu (Activation)	(None, 8, 8, 1632)	0	conv4_block44_0_bn[0][0]
conv4_block44_1_conv (Conv2D)	(None, 8, 8, 128)	208,896	conv4_block44_0_relu[0][
conv4_block44_1_bn (BatchNormalization)	(None, 8, 8, 128)	512	conv4_block44_1_conv[0][
conv4_block44_1_relu (Activation)	(None, 8, 8, 128)	0	conv4_block44_1_bn[0][0]
conv4_block44_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block44_1_relu[0][
conv4_block44_concat (Concatenate)	(None, 8, 8, 1664)	0	conv4_block43_concat[0][conv4_block44_2_conv[0][
conv4_block45_0_bn (BatchNormalization)	(None, 8, 8, 1664)	6,656	conv4_block44_concat[0][
conv4_block45_0_relu (Activation)	(None, 8, 8, 1664)	0	conv4_block45_0_bn[0][0]
conv4_block45_1_conv (Conv2D)	(None, 8, 8, 128)	212,992	conv4_block45_0_relu[0][
conv4_block45_1_bn (BatchNormalization)	(None, 8, 8, 128)	512	conv4_block45_1_conv[0][
conv4_block45_1_relu (Activation)	(None, 8, 8, 128)	0	conv4_block45_1_bn[0][0]
conv4_block45_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block45_1_relu[0][
conv4_block45_concat (Concatenate)	(None, 8, 8, 1696)	0	conv4_block44_concat[0][conv4_block45_2_conv[0][
conv4_block46_0_bn (BatchNormalization)	(None, 8, 8, 1696)	6,784	conv4_block45_concat[0][
conv4_block46_0_relu (Activation)	(None, 8, 8, 1696)	0	conv4_block46_0_bn[0][0]
conv4_block46_1_conv (Conv2D)	(None, 8, 8, 128)	217,088	conv4_block46_0_relu[0][
conv4_block46_1_bn (BatchNormalization)	(None, 8, 8, 128)	512	conv4_block46_1_conv[0][
conv4_block46_1_relu (Activation)	(None, 8, 8, 128)	0	conv4_block46_1_bn[0][0]
conv4_block46_2_conv (Conv2D)	(None, 8, 8, 32)	36,864	conv4_block46_1_relu[0][
conv4_block46_concat (Concatenate)	(None, 8, 8, 1728)	0	conv4_block45_concat[0][conv4_block46_2_conv[0][
conv4_block47_0_bn (BatchNormalization)	(None, 8, 8, 1728)	6,912	conv4_block46_concat[0][
conv4_block47_0_relu	(None, 8, 8, 1728)	0	conv4_block47_0_bn[0][0]

conv4_block47_1_conv (Conv2D) (None, 8, 8, 128) conv4_block47_1_bn (BatchNormalization) (None, 8, 8, 128) conv4_block47_1_relu (Activation) (None, 8, 8, 128) conv4_block47_2_conv (Conv2D) (None, 8, 8, 32) conv4_block47_concat (Concatenate) (None, 8, 8, 1760) conv4_block48_0_bn (BatchNormalization) (None, 8, 8, 1760) conv4_block48_0_relu (Activation) (None, 8, 8, 1760)	221,184 512 0 36,864 0 7,040	conv4_block47_0_relu[0][conv4_block47_1_conv[0][conv4_block47_1_bn[0][0] conv4_block47_1_relu[0][conv4_block46_concat[0][conv4_block47_2_conv[0][conv4_block47_concat[0][
(BatchNormalization) conv4_block47_1_relu (Activation) conv4_block47_2_conv (Conv2D) (None, 8, 8, 32) conv4_block47_concat (Concatenate) conv4_block48_0_bn (BatchNormalization) conv4_block48_0_relu (None, 8, 8, 1760)	0 36,864 0 7,040	conv4_block47_1_bn[0][0] conv4_block47_1_relu[0][conv4_block46_concat[0][conv4_block47_2_conv[0][conv4_block47_concat[0][
(Activation)(None, 8, 8, 32)conv4_block47_2_conv (Conv2D)(None, 8, 8, 32)conv4_block47_concat (Concatenate)(None, 8, 8, 1760)conv4_block48_0_bn (BatchNormalization)(None, 8, 8, 1760)conv4_block48_0_relu(None, 8, 8, 1760)	36,864 0 7,040	conv4_block47_1_relu[0][conv4_block46_concat[0][conv4_block47_2_conv[0][conv4_block47_concat[0][
conv4_block47_concat (None, 8, 8, 1760) conv4_block48_0_bn (None, 8, 8, 1760) conv4_block48_0_relu (None, 8, 8, 1760)	7,040	conv4_block46_concat[0][conv4_block47_2_conv[0][conv4_block47_concat[0][
<pre>(Concatenate) conv4_block48_0_bn (BatchNormalization) conv4_block48_0_relu (None, 8, 8, 1760)</pre>	7,040	conv4_block47_2_conv[0][conv4_block47_concat[0][
(BatchNormalization) conv4_block48_0_relu (None, 8, 8, 1760)	0	
		conv4_block48_0_bn[0][0]
conv4_block48_1_conv (Conv2D) (None, 8, 8, 128)	225,280	conv4_block48_0_relu[0][
conv4_block48_1_bn (None, 8, 8, 128) (BatchNormalization)	512	conv4_block48_1_conv[0][
conv4_block48_1_relu (None, 8, 8, 128) (Activation)	0	conv4_block48_1_bn[0][0]
conv4_block48_2_conv (Conv2D) (None, 8, 8, 32)	36,864	conv4_block48_1_relu[0][
conv4_block48_concat (None, 8, 8, 1792) (Concatenate)	0	conv4_block47_concat[0][conv4_block48_2_conv[0][
pool4_bn (BatchNormalization) (None, 8, 8, 1792)	7,168	conv4_block48_concat[0][
pool4_relu (Activation) (None, 8, 8, 1792)	0	pool4_bn[0][0]
pool4_conv (Conv2D) (None, 8, 8, 896)	1,605,632	pool4_relu[0][0]
pool4_pool (AveragePooling2D) (None, 4, 4, 896)	0	pool4_conv[0][0]
conv5_block1_0_bn (None, 4, 4, 896) (BatchNormalization)	3,584	pool4_pool[0][0]
conv5_block1_0_relu (None, 4, 4, 896) (Activation)	0	conv5_block1_0_bn[0][0]
conv5_block1_1_conv (Conv2D) (None, 4, 4, 128)	114,688	conv5_block1_0_relu[0][0
conv5_block1_1_bn (None, 4, 4, 128) (BatchNormalization)	512	conv5_block1_1_conv[0][0
conv5_block1_1_relu (None, 4, 4, 128) (Activation)	0	conv5_block1_1_bn[0][0]
conv5_block1_2_conv (Conv2D) (None, 4, 4, 32)	36,864	conv5_block1_1_relu[0][0
conv5_block1_concat (None, 4, 4, 928) (Concatenate)	0	pool4_pool[0][0], conv5_block1_2_conv[0][0
conv5_block2_0_bn (None, 4, 4, 928) (BatchNormalization)	3,712	conv5_block1_concat[0][0
conv5_block2_0_relu (None, 4, 4, 928) (Activation)	0	conv5_block2_0_bn[0][0]
conv5_block2_1_conv (Conv2D) (None, 4, 4, 128)	118,784	conv5_block2_0_relu[0][0
conv5_block2_1_bn (None, 4, 4, 128) (BatchNormalization)	512	conv5_block2_1_conv[0][0
conv5_block2_1_relu (None, 4, 4, 128) (Activation)	0	conv5_block2_1_bn[0][0]
conv5_block2_2_conv (Conv2D) (None, 4, 4, 32)	36,864	conv5_block2_1_relu[0][0
conv5_block2_concat (None, 4, 4, 960) (Concatenate)	0	conv5_block1_concat[0][0 conv5_block2_2_conv[0][0
conv5_block3_0_bn (None, 4, 4, 960) (BatchNormalization)	3,840	conv5_block2_concat[0][0

conv5_block3_0_relu (Activation)	(None, 4, 4, 960)	0	conv5_block3_0_bn[0][0]
conv5_block3_1_conv (Conv2D)	(None, 4, 4, 128)	122,880	conv5_block3_0_relu[0][0
conv5_block3_1_bn (BatchNormalization)	(None, 4, 4, 128)	512	conv5_block3_1_conv[0][0
conv5_block3_1_relu (Activation)	(None, 4, 4, 128)	0	conv5_block3_1_bn[0][0]
conv5_block3_2_conv (Conv2D)	(None, 4, 4, 32)	36,864	conv5_block3_1_relu[0][0
conv5_block3_concat (Concatenate)	(None, 4, 4, 992)	0	conv5_block2_concat[0][0 conv5_block3_2_conv[0][0
conv5_block4_0_bn (BatchNormalization)	(None, 4, 4, 992)	3,968	conv5_block3_concat[0][0
conv5_block4_0_relu (Activation)	(None, 4, 4, 992)	0	conv5_block4_0_bn[0][0]
conv5_block4_1_conv (Conv2D)	(None, 4, 4, 128)	126,976	conv5_block4_0_relu[0][0
conv5_block4_1_bn (BatchNormalization)	(None, 4, 4, 128)	512	conv5_block4_1_conv[0][0
conv5_block4_1_relu (Activation)	(None, 4, 4, 128)	0	conv5_block4_1_bn[0][0]
conv5_block4_2_conv (Conv2D)	(None, 4, 4, 32)	36,864	conv5_block4_1_relu[0][0
conv5_block4_concat (Concatenate)	(None, 4, 4, 1024)	0	conv5_block3_concat[0][0 conv5_block4_2_conv[0][0
conv5_block5_0_bn (BatchNormalization)	(None, 4, 4, 1024)	4,096	conv5_block4_concat[0][0
conv5_block5_0_relu (Activation)	(None, 4, 4, 1024)	0	conv5_block5_0_bn[0][0]
conv5_block5_1_conv (Conv2D)	(None, 4, 4, 128)	131,072	conv5_block5_0_relu[0][0
conv5_block5_1_bn (BatchNormalization)	(None, 4, 4, 128)	512	conv5_block5_1_conv[0][0
conv5_block5_1_relu (Activation)	(None, 4, 4, 128)	0	conv5_block5_1_bn[0][0]
conv5_block5_2_conv (Conv2D)	(None, 4, 4, 32)	36,864	conv5_block5_1_relu[0][0
conv5_block5_concat (Concatenate)	(None, 4, 4, 1056)	0	conv5_block4_concat[0][0 conv5_block5_2_conv[0][0
conv5_block6_0_bn (BatchNormalization)	(None, 4, 4, 1056)	4,224	conv5_block5_concat[0][0
conv5_block6_0_relu (Activation)	(None, 4, 4, 1056)	0	conv5_block6_0_bn[0][0]
conv5_block6_1_conv (Conv2D)	(None, 4, 4, 128)	135,168	conv5_block6_0_relu[0][0
conv5_block6_1_bn (BatchNormalization)	(None, 4, 4, 128)	512	conv5_block6_1_conv[0][0
conv5_block6_1_relu (Activation)	(None, 4, 4, 128)	0	conv5_block6_1_bn[0][0]
conv5_block6_2_conv (Conv2D)	(None, 4, 4, 32)	36,864	conv5_block6_1_relu[0][0
conv5_block6_concat (Concatenate)	(None, 4, 4, 1088)	0	conv5_block5_concat[0][0 conv5_block6_2_conv[0][0
conv5_block7_0_bn (BatchNormalization)	(None, 4, 4, 1088)	4,352	conv5_block6_concat[0][0
conv5_block7_0_relu (Activation)	(None, 4, 4, 1088)	0	conv5_block7_0_bn[0][0]
conv5_block7_1_conv (Conv2D)	(None, 4, 4, 128)	139,264	conv5_block7_0_relu[0][0
conv5_block7_1_bn (BatchNormalization)	(None, 4, 4, 128)	512	conv5_block7_1_conv[0][0

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conv5_block7_1_relu (Activation)	(None, 4, 4, 128)	0	conv5_block7_1_bn[0][0]
conv5_block7_2_conv (Conv2D)	(None, 4, 4, 32)	36,864	conv5_block7_1_relu[0][0
conv5_block7_concat (Concatenate)	(None, 4, 4, 1120)	0	conv5_block6_concat[0][0 conv5_block7_2_conv[0][0
conv5_block8_0_bn (BatchNormalization)	(None, 4, 4, 1120)	4,480	conv5_block7_concat[0][0
conv5_block8_0_relu (Activation)	(None, 4, 4, 1120)	0	conv5_block8_0_bn[0][0]
conv5_block8_1_conv (Conv2D)	(None, 4, 4, 128)	143,360	conv5_block8_0_relu[0][0
conv5_block8_1_bn (BatchNormalization)	(None, 4, 4, 128)	512	conv5_block8_1_conv[0][0
conv5_block8_1_relu (Activation)	(None, 4, 4, 128)	0	conv5_block8_1_bn[0][0]
conv5_block8_2_conv (Conv2D)	(None, 4, 4, 32)	36,864	conv5_block8_1_relu[0][0
<pre>conv5_block8_concat (Concatenate)</pre>	(None, 4, 4, 1152)	0	conv5_block7_concat[0][0 conv5_block8_2_conv[0][0
conv5_block9_0_bn (BatchNormalization)	(None, 4, 4, 1152)	4,608	conv5_block8_concat[0][0
conv5_block9_0_relu (Activation)	(None, 4, 4, 1152)	0	conv5_block9_0_bn[0][0]
conv5_block9_1_conv (Conv2D)	(None, 4, 4, 128)	147,456	conv5_block9_0_relu[0][0
<pre>conv5_block9_1_bn (BatchNormalization)</pre>	(None, 4, 4, 128)	512	conv5_block9_1_conv[0][0
<pre>conv5_block9_1_relu (Activation)</pre>	(None, 4, 4, 128)	0	conv5_block9_1_bn[0][0]
conv5_block9_2_conv (Conv2D)	(None, 4, 4, 32)	36,864	conv5_block9_1_relu[0][0
<pre>conv5_block9_concat (Concatenate)</pre>	(None, 4, 4, 1184)	0	conv5_block8_concat[0][0 conv5_block9_2_conv[0][0
<pre>conv5_block10_0_bn (BatchNormalization)</pre>	(None, 4, 4, 1184)	4,736	conv5_block9_concat[0][0
<pre>conv5_block10_0_relu (Activation)</pre>	(None, 4, 4, 1184)	0	conv5_block10_0_bn[0][0]
conv5_block10_1_conv (Conv2D)	(None, 4, 4, 128)	151,552	conv5_block10_0_relu[0][
<pre>conv5_block10_1_bn (BatchNormalization)</pre>	(None, 4, 4, 128)	512	conv5_block10_1_conv[0][
<pre>conv5_block10_1_relu (Activation)</pre>	(None, 4, 4, 128)	0	conv5_block10_1_bn[0][0]
conv5_block10_2_conv (Conv2D)	(None, 4, 4, 32)	36,864	conv5_block10_1_relu[0][
<pre>conv5_block10_concat (Concatenate)</pre>	(None, 4, 4, 1216)	0	conv5_block9_concat[0][0 conv5_block10_2_conv[0][
<pre>conv5_block11_0_bn (BatchNormalization)</pre>	(None, 4, 4, 1216)	4,864	conv5_block10_concat[0][
<pre>conv5_block11_0_relu (Activation)</pre>	(None, 4, 4, 1216)	0	conv5_block11_0_bn[0][0]
conv5_block11_1_conv (Conv2D)	(None, 4, 4, 128)	155,648	conv5_block11_0_relu[0][
conv5_block11_1_bn (BatchNormalization)	(None, 4, 4, 128)	512	conv5_block11_1_conv[0][
<pre>conv5_block11_1_relu (Activation)</pre>	(None, 4, 4, 128)	0	conv5_block11_1_bn[0][0]
conv5_block11_2_conv (Conv2D)	(None, 4, 4, 32)	36,864	conv5_block11_1_relu[0][
conv5_block11_concat	(None, 4, 4, 1248)	0	conv5_block10_concat[0][

(Concatenate)			conv5_block11_2_conv[0][
conv5_block12_0_bn (BatchNormalization)	(None, 4, 4, 1248)	4,992	conv5_block11_concat[0][
conv5_block12_0_relu (Activation)	(None, 4, 4, 1248)	0	conv5_block12_0_bn[0][0]
conv5_block12_1_conv (Conv2D)	(None, 4, 4, 128)	159,744	conv5_block12_0_relu[0][
conv5_block12_1_bn (BatchNormalization)	(None, 4, 4, 128)	512	conv5_block12_1_conv[0][
conv5_block12_1_relu (Activation)	(None, 4, 4, 128)	0	conv5_block12_1_bn[0][0]
conv5_block12_2_conv (Conv2D)	(None, 4, 4, 32)	36,864	conv5_block12_1_relu[0][
conv5_block12_concat (Concatenate)	(None, 4, 4, 1280)	0	conv5_block11_concat[0][conv5_block12_2_conv[0][
conv5_block13_0_bn (BatchNormalization)	(None, 4, 4, 1280)	5,120	conv5_block12_concat[0][
conv5_block13_0_relu (Activation)	(None, 4, 4, 1280)	0	conv5_block13_0_bn[0][0]
conv5_block13_1_conv (Conv2D)	(None, 4, 4, 128)	163,840	conv5_block13_0_relu[0][
conv5_block13_1_bn (BatchNormalization)	(None, 4, 4, 128)	512	conv5_block13_1_conv[0][
conv5_block13_1_relu (Activation)	(None, 4, 4, 128)	0	conv5_block13_1_bn[0][0]
conv5_block13_2_conv (Conv2D)	(None, 4, 4, 32)	36,864	conv5_block13_1_relu[0][
conv5_block13_concat (Concatenate)	(None, 4, 4, 1312)	0	conv5_block12_concat[0][conv5_block13_2_conv[0][
conv5_block14_0_bn (BatchNormalization)	(None, 4, 4, 1312)	5,248	conv5_block13_concat[0][
conv5_block14_0_relu (Activation)	(None, 4, 4, 1312)	0	conv5_block14_0_bn[0][0]
conv5_block14_1_conv (Conv2D)	(None, 4, 4, 128)	167,936	conv5_block14_0_relu[0][
conv5_block14_1_bn (BatchNormalization)	(None, 4, 4, 128)	512	conv5_block14_1_conv[0][
conv5_block14_1_relu (Activation)	(None, 4, 4, 128)	0	conv5_block14_1_bn[0][0]
conv5_block14_2_conv (Conv2D)	(None, 4, 4, 32)	36,864	conv5_block14_1_relu[0][
conv5_block14_concat (Concatenate)	(None, 4, 4, 1344)	0	conv5_block13_concat[0][conv5_block14_2_conv[0][
conv5_block15_0_bn (BatchNormalization)	(None, 4, 4, 1344)	5,376	conv5_block14_concat[0][
conv5_block15_0_relu (Activation)	(None, 4, 4, 1344)	0	conv5_block15_0_bn[0][0]
conv5_block15_1_conv (Conv2D)	(None, 4, 4, 128)	172,032	conv5_block15_0_relu[0][
conv5_block15_1_bn (BatchNormalization)	(None, 4, 4, 128)	512	conv5_block15_1_conv[0][
conv5_block15_1_relu (Activation)	(None, 4, 4, 128)	0	conv5_block15_1_bn[0][0]
conv5_block15_2_conv (Conv2D)	(None, 4, 4, 32)	36,864	conv5_block15_1_relu[0][
conv5_block15_concat (Concatenate)	(None, 4, 4, 1376)	0	conv5_block14_concat[0][conv5_block15_2_conv[0][
conv5_block16_0_bn (BatchNormalization)	(None, 4, 4, 1376)	5,504	conv5_block15_concat[0][
conv5_block16_0_relu (Activation)	(None, 4, 4, 1376)	0	conv5_block16_0_bn[0][0]

Conv5_block16_1_bn (None, 4, 4, 128) 512 conv5_block16_1_conv5_block16_1 conv5_block16_1 relu (Rone, 4, 4, 128) 8 conv5_block16_1 relu (Rone, 4, 4, 1498) 9 conv5_block16_1 relu (Rone, 4, 4, 1498) 9 conv5_block16_2 conv5_block16_2 conv5_block17_0 pn (Rone, 4, 4, 1498) 9 conv5_block17_0 pn (Rone, 4, 4, 1498) 9 conv5_block17_0 conv5_block17_1 conv5_block17_2 conv5_block18_0 conv5		I	1	I
(ReachNormelization) conv5_black16_1_relu (Retivation) conv5_black16_1_relu (Retivation) conv5_black16_1_relu (Retivation) conv5_black16_1_relu (Retivation) conv5_black16_1_relu (Rone, 4, 4, 1408) 0 conv5_black16_concat (Concatenate) conv5_black17_0_bn (None, 4, 4, 1408) 5_632_conv5_black17_0_bn (Retivation) conv5_black17_0_enu (Retivation) conv5_black17_1_conv (Conv5_black17_0_cnu (Rone, 4, 4, 1408) 0 conv5_black17_0_enu (Retivation) conv5_black17_1_conv (Conv5_black17_1_conv (Conv5_black17_1_conv (Conv5_black17_1_relu (Rone, 4, 4, 128) conv5_black17_1_relu (Rone, 4, 4, 128) conv5_black17_1_relu (Rone, 4, 4, 1408) conv5_black18_1_conv (Conv5_black18_1_conv (Conv5_black1	conv5_block16_1_conv (Conv2D)	(None, 4, 4, 128)	176,128	conv5_block16_0_relu[0][
Conv5 block16 concat (None, 4, 4, 1408) Conv5 block17 0 bn (None, 4, 4, 1408) Conv5 block17 1 bn (None, 4, 4, 128) Conv5 block17 2 conv (Conv5 block17 1 bn (None, 4, 4, 1409) Conv5 block17 2 conv (Conv5 block17 2 conv (Conv5 block18 0 bn (None, 4, 4, 1440) Conv5 block18 0 bn (None, 4, 4, 1440) Conv5 block18 0 conv5 block18 0 conv5 block18 0 bn (None, 4, 4, 1440) Conv5 block18 0 conv5 block18 0 conv5 block18 0 bn (None, 4, 4, 128) Conv5 block18 1 bn (None, 4, 4, 128) Conv5 block18 1 conv (Conv5 block19 0 conv (None, 4, 4, 128) Conv5 block18 1 conv (Conv5 block19 1 conv (Conv5 block20 0 bn (RatchNormalization) Conv5 block20 0 bn (RatchNormalization) Conv5 block20 0 conv5 block20 0 bn (RatchNormalization) Conv5 b	<pre>conv5_block16_1_bn (BatchNormalization)</pre>	(None, 4, 4, 128)	512	conv5_block16_1_conv[0][
Conv5_block16_concat (Concatenate)		(None, 4, 4, 128)	0	conv5_block16_1_bn[0][0]
Conv5_block17 9 bn (None, 4, 4, 1408) 5,632 Conv5_block16_conc (BatchNormalization) (None, 4, 4, 1408) 5,632 Conv5_block16_conc (BatchNormalization) (None, 4, 4, 1408) 0 Conv5_block17 0 bn (Note) None, 4, 4, 128) 180,224 Conv5_block17_0_conc (Conv5_block17_1_conc (Conv5_block18_0_conv5_block18_0_conv5_block18_0_conv5_block18_0_conv5_block18_0_conv5_block18_0_conv5_block18_0_conv5_block18_0_conv5_block18_0_conv5_block18_0_conv5_block18_0_conv5_block18_0_conv5_block18_0_conv5_block18_1_conv5_block18_1_conv5_block18_1_conv5_block18_1_conv5_block18_1_conv5_block18_1_conv5_block18_1_conv5_block18_1_conv5_block18_0_conv5_block18_1_conv5_block18_1_conv5_block18_1_conv5_block18_1_conv5_block18_1_conv5_block18_1_conv5_block18_1_conv5_block19_0_conv5_block19_0_conv5_block19_0_conv5_block19_0_conv5_block19_0_conv5_block19_0_conv5_block19_0_conv5_block19_0_conv5_block19_0_conv5_block19_1_conv5_block19_1_conv5_block19_1_conv5_block19_1_conv5_block19_1_conv5_block19_1_conv5_block19_1_conv5_block19_1_conv5_block19_1_conv5_block19_1_conv5_block19_1_conv5_block19_1_conv5_block19_1_conv5_block19_1_conv5_block19_1_conv5_block19_1_conv5_block19_1_conv5_block19_1_conv5_block19_1_conv5_block20_0_conv5_block20_0_conv5_block20_0_conv5_block20_0_conv5_block20_0_conv5_block20_0_conv5_block20_0_conv5_block20_0_conv5_block20_0_conv5_block20_0_con	conv5_block16_2_conv (Conv2D)	(None, 4, 4, 32)	36,864	conv5_block16_1_relu[0][
(BatchNormalization) (None, 4, 4, 1408) 0 conv5_block17_0_relu (Activation) conv5_block17_1_conv (Conv2D) (None, 4, 4, 128) 189,224 conv5_block17_0_relu (Conv2D) conv5_block17_1_bn (BatchNormalization) (None, 4, 4, 128) 512 conv5_block17_1_conv (Conv2D) conv5_block17_1 relu (Retivation) (None, 4, 4, 128) 0 conv5_block17_1 relu (Activation) conv5_block17_concat (Concatenate) (None, 4, 4, 1448) 0 conv5_block17_1 relu conv5_block17_conv5_block17_conv6_conv5_block18_0. conv5_block18_0_bn (BatchNormalization) (None, 4, 4, 1448) 5,760 conv5_block18_0.br (Activation) conv5_block18_1_bn (BatchNormalization) (None, 4, 4, 128) 184,320 conv5_block18_0.br (Activation) conv5_block18_1_bn (RatchNormalization) (None, 4, 4, 128) 184,320 conv5_block18_1.br (Activation) conv5_block18_1_relu (Rotenatization) (None, 4, 4, 128) 0 conv5_block18_1.br (Activation) conv5_block18_1_relu (Rotenatization) (None, 4, 4, 128) 0 conv5_block18_1.br (Activation) conv5_block18_1_relu (Rotenatization) (None, 4, 4, 128) 0 conv5_block18_1.br (Conv5_block18_1.br (Conv5_block18_1.br (Conv5_block18_1.br (Conv5_block18_1.br (C		(None, 4, 4, 1408)	0	conv5_block15_concat[0][conv5_block16_2_conv[0][
(Activation) (None, 4, 4, 128) 188,224 conv5_block17_0 reconv5_block17_1_br conv5_block17_1_br (None, 4, 4, 128) 512 conv5_block17_1 reconv5_block17_1 reconv5_block17 relu conv5_block17_1 relu (None, 4, 4, 128) 0 conv5_block17_1 br conv5_block17_concat (None, 4, 4, 1448) 0 conv5_block17_concat conv5_block18_br (None, 4, 4, 1448) 5,760 conv5_block17_concat conv5_block18_br (None, 4, 4, 1448) 5,760 conv5_block17_concat conv5_block18_br (None, 4, 4, 1448) 0 conv5_block18_concans_conv5_block18_br conv5_block18_br (None, 4, 4, 1448) 0 conv5_block18_br conv5_block18_lorelu (None, 4, 4, 128) 184,320 conv5_block18_br conv5_block18_lorelu (None, 4, 4, 128) 0 conv5_block18_lorelu conv5_block18_lorelu (None, 4, 4, 128) 0 conv5_block18_lorelu conv5_block18_lorelu (None, 4, 4, 128) 0 conv5_block18_lorelu conv5_block18_lorelu (None, 4, 4, 1472) 0 conv5_block18_lorelu conv5_block19_lorelu		(None, 4, 4, 1408)	5,632	conv5_block16_concat[0][
Conv5_block17_1_bn (BatchNormalization) (None, 4, 4, 128) 512 conv5_block17_1_conv5_block17_1_conv5_block17_1_conv5_block17_1_conv5_block17_1_conv5_block17_1_conv5_block17_1_conv5_block17_1_conv5_block17_1_conv5_block17_2_conv (Conv2D) (None, 4, 4, 128) 36,864 conv5_block17_1_reconv5_block17_concat (Concatenate) (None, 4, 4, 1440) 36,864 conv5_block17_2_conv5_block18_0_bn (None, 4, 4, 1440) 37,760 conv5_block17_concat (Concatenate) (None, 4, 4, 1440) 37,760 conv5_block18_0_bn (None, 4, 4, 1440) 37,760 conv5_block18_0_bn (None, 4, 4, 1440) 37,760 conv5_block18_0_bn (None, 4, 4, 128) 384,320 conv5_block18_0_bn (None, 4, 4, 128) 384,320 conv5_block18_0_bn (None, 4, 4, 128) 384,320 conv5_block18_0_reconv5_block18_1_bn (None, 4, 4, 128) 384,320 conv5_block18_0_reconv5_block18_1_bn (None, 4, 4, 128) 36,864 conv5_block18_1_bn (None, 4, 4, 128) 36,864 conv5_block18_1_bn (None, 4, 4, 1472) 36,864 conv5_block18_1_bn (None, 4, 4, 1472) 36,864 conv5_block18_1_conv5_block18_1_conv5_block19_0_pn (None, 4, 4, 1472) 36,888 conv5_block19_0_pn (None, 4, 4, 1472) 36,888 conv5_block19_0_pn (None, 4, 4, 1472) 36,888 conv5_block19_0_pn (None, 4, 4, 1472) 36,884 conv5_block19_0_pn (None, 4, 4, 1472) 36,884 conv5_block19_0_pn (None, 4, 4, 128) 36,864 conv5_b		(None, 4, 4, 1408)	0	conv5_block17_0_bn[0][0]
(RatchNormalization) convs block17_1_relu (Activation) convs_block17_2_conv (Conv2D) (None, 4, 4, 128) d convs_block17_1_br (Activation) convs_block17_2_conv (Conv2D) (None, 4, 4, 32) 36,864 convs_block17_1_rec convs_block17_2_conv (Concatenate) (None, 4, 4, 1440) d convs_block18_0 d convs_block18_0 convs_block18_0 convs_block18_0_relu (Activation) (None, 4, 4, 1440) d convs_block18_0_br (Activation) (None, 4, 4, 1440) d convs_block18_0_br (Activation) (None, 4, 4, 128) (None, 4, 4, 1472) (None, 4, 4, 128) (N	conv5_block17_1_conv (Conv2D)	(None, 4, 4, 128)	180,224	conv5_block17_0_relu[0][
(Activation) (None, 4, 4, 32) 36,864 conv5_block17_concat (Concatenate) conv5_block17_concat (Concatenate) (None, 4, 4, 1440) 0 conv5_block17_conc (conv5_block17_conc (conv5_block17_conc (conv5_block18_0_bn (BatchNormalization)) conv5_block18_0_relu (None, 4, 4, 1440) 5,760 conv5_block18_0_bn (Rone, 4, 4, 1440) 0 conv5_block18_0_bn (Rone, 4, 4, 1440) 0 conv5_block18_0_bn (Rone, 4, 4, 1440) 0 conv5_block18_0_bn (Rone, 4, 4, 128) 184,320 conv5_block18_0_bn (Rone, 4, 4, 128) 184,320 conv5_block18_0_bn (Rone, 4, 4, 128) 0 conv5_block18_0_bn (Rone, 4, 4, 128) 0 conv5_block18_0_bn (Rone, 4, 4, 128) 0 conv5_block18_1_con (Rone, 4, 4, 128) 0 conv5_block18_1_con (Rone, 4, 4, 128) 0 conv5_block18_1_con (Rone, 4, 4, 1472) 0 conv5_block18_1_relu (Rone, 4, 4, 1472) 0 conv5_block18_1_relu (Rone, 4, 4, 1472) 0 conv5_block18_1_relu (Rone, 4, 4, 1472) 0 conv5_block18_1_con (Rone, 4, 4, 1472) 0 conv5_block18_con (Rone, 4, 4, 1472) 0 conv5_block19_0_bn (Rone, 4, 4, 128)		(None, 4, 4, 128)	512	conv5_block17_1_conv[0][
conv5_block18_concat (Concatenate) (None, 4, 4, 1440) 0 conv5_block16_conc conv5_block17_2_coc conv5_block18_0_relu (Activation) (None, 4, 4, 1440) 5,760 conv5_block18_0_renc conv5_block18_0_relu (Activation) (None, 4, 4, 1440) 0 conv5_block18_0_bn conv5_block18_1_conv (Conv2D) (None, 4, 4, 128) 184,320 conv5_block18_0_renc conv5_block18_1_bn (BatchNormalization) (None, 4, 4, 128) 0 conv5_block18_1_conv conv5_block18_1_relu (Activation) (None, 4, 4, 128) 0 conv5_block18_1_conv conv5_block18_2_conv (Conv2D) (None, 4, 4, 1472) 0 conv5_block18_1_renconv5_block18_1_renconv5_block19_0_bn conv5_block19_0_bn (BatchNormalization) (None, 4, 4, 1472) 5,888 conv5_block18_concat(conv5_block19_0_bn conv5_block19_1_conv (Conv2D) (None, 4, 4, 1472) 0 conv5_block19_0_bn conv5_block19_1_conv (Conv2D) (None, 4, 4, 128) 188,416 conv5_block19_1_conv conv5_block19_1_relu (Activation) (None, 4, 4, 128) 0 conv5_block19_1_conv conv5_block19_concat (Concatenate) (None, 4, 4, 128) 0 conv5_block19_1_conv <tr< td=""><td></td><td>(None, 4, 4, 128)</td><td>0</td><td>conv5_block17_1_bn[0][0]</td></tr<>		(None, 4, 4, 128)	0	conv5_block17_1_bn[0][0]
(Concatenate) Conv5_block18_0_bn (None, 4, 4, 1440) 5,760 conv5_block17_2_cc conv5_block18_0_relu (None, 4, 4, 1440) 0 conv5_block18_0_bn (Activation) (None, 4, 4, 128) 184,320 conv5_block18_0_relu (Activation) (None, 4, 4, 128) 184,320 conv5_block18_0_relu (Activation) (None, 4, 4, 128) 184,320 conv5_block18_0_relu (Conv5_block18_1_bn (None, 4, 4, 128) 0 conv5_block18_1_cc (BatchNormalization) (None, 4, 4, 128) 0 conv5_block18_1_cc conv5_block18_concat (None, 4, 4, 1472) 0 conv5_block18_1_cc conv5_block19_0_bn (None, 4, 4, 1472) 5,888 conv5_block19_cbla_conc (BatchNormalization) (None, 4, 4, 1472) 0 conv5_block19_cbl_cbl_gone conv5_block19_1_bn (None, 4, 4, 128) 188,416 conv5_block19_cbl_cbl_gone conv5_block19_1_conv (Conv2D) (None, 4, 4, 128) 188,416 conv5_block19_cbl_cbl_gone conv5_block19_1_relu (None, 4, 4, 128) 0 conv5_block19_concat conv5_block19_concat	conv5_block17_2_conv (Conv2D)	(None, 4, 4, 32)	36,864	conv5_block17_1_relu[0][
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(Activation) conv5_block21_2_conv (Conv2D) (None, 4, 4, 32) 36,864 conv5_block21_1_rel conv5_block21_concat (Concatenate) (None, 4, 4, 1568) 0 conv5_block20_conca conv5_block21_2_con conv5_block22_0_bn (BatchNormalization) (None, 4, 4, 1568) 6,272 conv5_block21_conca conv5_block22_0_relu (Activation) (None, 4, 4, 1568) 0 conv5_block22_0_bn[conv5_block22_1_conv (Conv2D) (None, 4, 4, 128) 200,704 conv5_block22_0_rel conv5_block22_1_bn (BatchNormalization) (None, 4, 4, 128) 512 conv5_block22_1_con conv5_block22_1_relu (Activation) (None, 4, 4, 128) 0 conv5_block22_1_bn[conv5_block22_2_conv (Conv2D) (None, 4, 4, 32) 36,864 conv5_block22_1_rel conv5_block22_concat (Concatenate) (None, 4, 4, 1600) 0 conv5_block21_concatenate
conv5_block21_concat (Concatenate) (None, 4, 4, 1568) 0 conv5_block20_concat conv5_block21_2_con conv5_block22_0_bn (BatchNormalization) (None, 4, 4, 1568) 6,272 conv5_block21_conca conv5_block22_0_relu (Activation) (None, 4, 4, 1568) 0 conv5_block22_0_bn[conv5_block22_1_conv (Conv2D) (None, 4, 4, 128) 200,704 conv5_block22_0_rel conv5_block22_1_bn (BatchNormalization) (None, 4, 4, 128) 512 conv5_block22_1_con conv5_block22_1_relu (Activation) (None, 4, 4, 128) 0 conv5_block22_1_bn[conv5_block22_2_conv (Conv2D) (None, 4, 4, 32) 36,864 conv5_block22_1_rel conv5_block22_concat (Concatenate) (None, 4, 4, 1600) 0 conv5_block21_conca conv5_block22_2_con
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conv5_block23_0_relu (None, 4, 4, 1600) 0 conv5_block23_0_bn[(Activation)
conv5_block23_1_conv (Conv2D) (None, 4, 4, 128) 204,800 conv5_block23_0_rel
conv5_block23_1_bn (None, 4, 4, 128) 512 conv5_block23_1_con (BatchNormalization)
conv5_block23_1_relu (None, 4, 4, 128) 0 conv5_block23_1_bn[(Activation)
conv5_block23_2_conv (Conv2D) (None, 4, 4, 32) 36,864 conv5_block23_1_rel
conv5_block23_concat (None, 4, 4, 1632) 0 conv5_block22_concat conv5_block23_2_concat
conv5_block24_0_bn (None, 4, 4, 1632) 6,528 conv5_block23_conca (BatchNormalization)
conv5_block24_0_relu (None, 4, 4, 1632) 0 conv5_block24_0_bn[(Activation)
conv5_block24_1_conv (Conv2D) (None, 4, 4, 128) 208,896 conv5_block24_0_rel
conv5_block24_1_bn (None, 4, 4, 128) 512 conv5_block24_1_con (BatchNormalization)
conv5_block24_1_relu (None, 4, 4, 128) 0 conv5_block24_1_bn[(Activation)
conv5_block24_2_conv (Conv2D) (None, 4, 4, 32) 36,864 conv5_block24_1_rel
conv5_block24_concat (None, 4, 4, 1664) 0 conv5_block23_concat conv5_block24_2_con

conv5_block25_0_bn (BatchNormalization)	(None, 4, 4, 1664)	6,656	conv5_block24_concat[0][
conv5_block25_0_relu (Activation)	(None, 4, 4, 1664)	0	conv5_block25_0_bn[0][0]
conv5_block25_1_conv (Conv2D)	(None, 4, 4, 128)	212,992	conv5_block25_0_relu[0][
conv5_block25_1_bn (BatchNormalization)	(None, 4, 4, 128)	512	conv5_block25_1_conv[0][
conv5_block25_1_relu (Activation)	(None, 4, 4, 128)	0	conv5_block25_1_bn[0][0]
conv5_block25_2_conv (Conv2D)	(None, 4, 4, 32)	36,864	conv5_block25_1_relu[0][
conv5_block25_concat (Concatenate)	(None, 4, 4, 1696)	0	conv5_block24_concat[0][conv5_block25_2_conv[0][
conv5_block26_0_bn (BatchNormalization)	(None, 4, 4, 1696)	6,784	conv5_block25_concat[0][
conv5_block26_0_relu (Activation)	(None, 4, 4, 1696)	0	conv5_block26_0_bn[0][0]
conv5_block26_1_conv (Conv2D)	(None, 4, 4, 128)	217,088	conv5_block26_0_relu[0][
conv5_block26_1_bn (BatchNormalization)	(None, 4, 4, 128)	512	conv5_block26_1_conv[0][
conv5_block26_1_relu (Activation)	(None, 4, 4, 128)	0	conv5_block26_1_bn[0][0]
conv5_block26_2_conv (Conv2D)	(None, 4, 4, 32)	36,864	conv5_block26_1_relu[0][
conv5_block26_concat (Concatenate)	(None, 4, 4, 1728)	0	conv5_block25_concat[0][conv5_block26_2_conv[0][
conv5_block27_0_bn (BatchNormalization)	(None, 4, 4, 1728)	6,912	conv5_block26_concat[0][
conv5_block27_0_relu (Activation)	(None, 4, 4, 1728)	0	conv5_block27_0_bn[0][0]
conv5_block27_1_conv (Conv2D)	(None, 4, 4, 128)	221,184	conv5_block27_0_relu[0][
conv5_block27_1_bn (BatchNormalization)	(None, 4, 4, 128)	512	conv5_block27_1_conv[0][
conv5_block27_1_relu (Activation)	(None, 4, 4, 128)	0	conv5_block27_1_bn[0][0]
conv5_block27_2_conv (Conv2D)	(None, 4, 4, 32)	36,864	conv5_block27_1_relu[0][
conv5_block27_concat (Concatenate)	(None, 4, 4, 1760)	0	conv5_block26_concat[0][conv5_block27_2_conv[0][
conv5_block28_0_bn (BatchNormalization)	(None, 4, 4, 1760)	7,040	conv5_block27_concat[0][
conv5_block28_0_relu (Activation)	(None, 4, 4, 1760)	0	conv5_block28_0_bn[0][0]
conv5_block28_1_conv (Conv2D)	(None, 4, 4, 128)	225,280	conv5_block28_0_relu[0][
conv5_block28_1_bn (BatchNormalization)	(None, 4, 4, 128)	512	conv5_block28_1_conv[0][
conv5_block28_1_relu (Activation)	(None, 4, 4, 128)	0	conv5_block28_1_bn[0][0]
conv5_block28_2_conv (Conv2D)	(None, 4, 4, 32)	36,864	conv5_block28_1_relu[0][
conv5_block28_concat (Concatenate)	(None, 4, 4, 1792)	0	conv5_block27_concat[0][conv5_block28_2_conv[0][
conv5_block29_0_bn (BatchNormalization)	(None, 4, 4, 1792)	7,168	conv5_block28_concat[0][
conv5_block29_0_relu (Activation)	(None, 4, 4, 1792)	0	conv5_block29_0_bn[0][0]
conv5_block29_1_conv (Conv2D)	(None, 4, 4, 128)	229,376	conv5_block29_0_relu[0][

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conv5_block29_1_bn (BatchNormalization)	(None, 4, 4, 128)	512	conv5_block29_1_conv[0][
conv5_block29_1_relu (Activation)	(None, 4, 4, 128)	0	conv5_block29_1_bn[0][0]
conv5_block29_2_conv (Conv2D)	(None, 4, 4, 32)	36,864	conv5_block29_1_relu[0][
conv5_block29_concat (Concatenate)	(None, 4, 4, 1824)	0	conv5_block28_concat[0][conv5_block29_2_conv[0][
conv5_block30_0_bn (BatchNormalization)	(None, 4, 4, 1824)	7,296	conv5_block29_concat[0][
conv5_block30_0_relu (Activation)	(None, 4, 4, 1824)	0	conv5_block30_0_bn[0][0]
conv5_block30_1_conv (Conv2D)	(None, 4, 4, 128)	233,472	conv5_block30_0_relu[0][
conv5_block30_1_bn (BatchNormalization)	(None, 4, 4, 128)	512	conv5_block30_1_conv[0][
conv5_block30_1_relu (Activation)	(None, 4, 4, 128)	0	conv5_block30_1_bn[0][0]
conv5_block30_2_conv (Conv2D)	(None, 4, 4, 32)	36,864	conv5_block30_1_relu[0][
conv5_block30_concat (Concatenate)	(None, 4, 4, 1856)	0	conv5_block29_concat[0][conv5_block30_2_conv[0][
conv5_block31_0_bn (BatchNormalization)	(None, 4, 4, 1856)	7,424	conv5_block30_concat[0][
conv5_block31_0_relu (Activation)	(None, 4, 4, 1856)	0	conv5_block31_0_bn[0][0]
conv5_block31_1_conv (Conv2D)	(None, 4, 4, 128)	237,568	conv5_block31_0_relu[0][
conv5_block31_1_bn (BatchNormalization)	(None, 4, 4, 128)	512	conv5_block31_1_conv[0][
conv5_block31_1_relu (Activation)	(None, 4, 4, 128)	0	conv5_block31_1_bn[0][0]
conv5_block31_2_conv (Conv2D)	(None, 4, 4, 32)	36,864	conv5_block31_1_relu[0][
conv5_block31_concat (Concatenate)	(None, 4, 4, 1888)	0	conv5_block30_concat[0][conv5_block31_2_conv[0][
conv5_block32_0_bn (BatchNormalization)	(None, 4, 4, 1888)	7,552	conv5_block31_concat[0][
conv5_block32_0_relu (Activation)	(None, 4, 4, 1888)	0	conv5_block32_0_bn[0][0]
conv5_block32_1_conv (Conv2D)	(None, 4, 4, 128)	241,664	conv5_block32_0_relu[0][
conv5_block32_1_bn (BatchNormalization)	(None, 4, 4, 128)	512	conv5_block32_1_conv[0][
conv5_block32_1_relu (Activation)	(None, 4, 4, 128)	0	conv5_block32_1_bn[0][0]
conv5_block32_2_conv (Conv2D)	(None, 4, 4, 32)	36,864	conv5_block32_1_relu[0][
conv5_block32_concat (Concatenate)	(None, 4, 4, 1920)	0	conv5_block31_concat[0][conv5_block32_2_conv[0][
bn (BatchNormalization)	(None, 4, 4, 1920)	7,680	conv5_block32_concat[0][
relu (Activation)	(None, 4, 4, 1920)	0	bn[0][0]
<pre>max_pool (GlobalMaxPooling2D)</pre>	(None, 1920)	0	relu[0][0]
dense (Dense)	(None, 512)	983,552	max_pool[0][0]
dense_1 (Dense)	(None, 2)	1,026	dense[0][0]

Total params: 19,306,562 (73.65 MB) **Trainable params:** 984,578 (3.76 MB)

Non-trainable params: 18,321,984 (69.89 MB)

```
4
In [12]: history=dense model.fit(X train,y train,batch size=16,validation data=(X test,y test),epochs=10)
          Epoch 1/10
          169/169
                                      - 254s ls/step - accuracy: 0.9321 - loss: 0.3118 - val accuracy: 0.9956 - val loss:
          0.0393
          Epoch 2/10
          169/169
                                       - 236s 1s/step - accuracy: 0.9983 - loss: 0.0079 - val accuracy: 0.9956 - val loss:
          0.0080
          Epoch 3/10
          169/169
                                       270s 2s/step - accuracy: 0.9973 - loss: 0.0085 - val accuracy: 0.9941 - val loss:
          0.0123
          Epoch 4/10
          169/169
                                       259s 2s/step - accuracy: 1.0000 - loss: 1.0984e-04 - val_accuracy: 0.9970 - val_lo
          ss: 0.0084
          Epoch 5/10
          169/169
                                       268s 2s/step - accuracy: 1.0000 - loss: 2.7809e-05 - val_accuracy: 0.9970 - val_lo
          ss: 0.0081
          Fnoch 6/10
          169/169
                                       - 269s 2s/step - accuracy: 1.0000 - loss: 1.9786e-05 - val accuracy: 0.9970 - val lo
          ss: 0.0079
          Epoch 7/10
          169/169
                                        250s 1s/step - accuracy: 1.0000 - loss: 1.9034e-05 - val_accuracy: 0.9970 - val_lo
          ss: 0.0077
          Epoch 8/10
          169/169
                                       239s 1s/step - accuracy: 1.0000 - loss: 7.1055e-06 - val accuracy: 0.9970 - val lo
          ss: 0.0075
          Epoch 9/10
          169/169
                                       - 243s ls/step - accuracy: 1.0000 - loss: 1.1527e-05 - val accuracy: 0.9970 - val lo
          ss: 0.0075
          Epoch 10/10
          169/169
                                      - 244s 1s/step - accuracy: 1.0000 - loss: 1.3113e-05 - val accuracy: 0.9970 - val lo
          ss: 0.0073
In [13]: history.history['accuracy']
          history.history['val_accuracy']
Out[13]: [0.995555579662323,
           0.995555579662323,
           0.9940740466117859.
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In [14]: print("Training Accuracy: ", history history['accuracy'][-1])
          print("Validation Accuracy: ", history.history['val_accuracy'][-1])
          Training Accuracy: 1.0
          Validation Accuracy: 0.9970370531082153
          with plt.style.context (style='ggplot'):
In [15]:
              fig, axes=plt.subplots(nrows=1, ncols=2, figsize=(18,8))
              axes[0].plot(history.history["accuracy"],label="accuracy")
              axes[0].plot(history.history["val_accuracy"],label="val_accuracy")
              axes[0].set_title(label='Accuracy plot-graphs')
              axes[0].set_xlabel(xlabel='Number of epochs')
              axes[0].set_ylabel(ylabel='Accuracy')
              axes[0].legend()
              axes[1].plot(history.history["loss"], label="loss")
axes[1].plot(history.history["val_loss"], label="val_loss")
              axes[1].set_title(label='Loss plot-graphs')
              axes[1].set xlabel(xlabel='Number of epochs')
              axes[1].set_ylabel(ylabel='Loss')
              axes[1].legend()
              fig.tight_layout()
```

plt.show()



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1, 1, 0, 1, 1, 1, 0, 0, 1, 0, 1, 1, 1, 1, 0, 1, 1, 1,
                                                   1, 1,
                                                        1, 1, 1, 0, 0, 1, 1, 1, 1, 1, 0, 1, 0, 1,
  1, 1, 0, 0, 0, 1, 1, 0, 0, 1, 1, 1, 1,
                                     1, 1, 0, 0,
                                                0, 1, 0,
                                                        1, 0, 0,
                                                                0, 1, 0, 0, 0, 1, 1,
                                                                                   1, 0, 1, 1,
0, 0, 0, 1, 0, 1, 0, 1, 0, 1, 0, 0, 0, 0, 0, 0, 0, 1,
                                                0, 0, 0, 0,
                                                          1, 0, 0, 1, 1, 0, 1, 0, 0, 0, 1, 0, 1,
1, 0, 1, 1, 1, 0, 1, 0]
```

Result Analysis

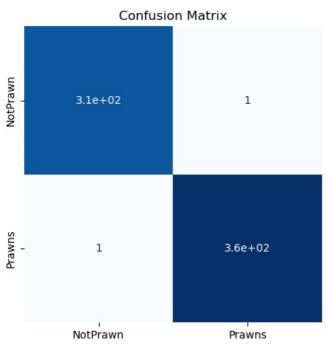
Classification Report

```
In [24]: from IPython.core.display import display, HTML
    display (HTML("<h1>DenseNet201 model classification report"))
    print(classification_report(y_true=true_labels,y_pred=dense_model_pred, target_names=class_labels))
```

DenseNet201 model classification report

	precision	recall	f1-score	support
NotPrawn Prawns	1.00 1.00	1.00 1.00	1.00 1.00	310 365
accuracy macro avg weighted avg	1.00 1.00	1.00 1.00	1.00 1.00 1.00	675 675 675

```
In [25]: plt.figure(figsize=(5,5))
    sns.heatmap(data=confusion_matrix(y_true=true_labels,y_pred=dense_model_pred),
    annot=True,
    #fmt='d'
    cbar=False,
    cmap=plt.cm.Blues,
    xticklabels=class_labels,
    yticklabels=class_labels)
    plt.title(label='Confusion Matrix')
    plt.show()
```



```
In [26]: dense_model.save("Prawnsnew_DenseNet201_model.keras")

In [28]: from IPvthon.display import Image.display
```

```
#import tensorflow as tf
         from tensorflow.keras.models import load model
In [32]:
         model=load model(filepath='Prawnsnew DenseNet201 model.keras',compile=False)
         model.compile(optimizer='adam', loss='categorical crossentropy', metrics=['accuracy'])
In [31]: class_labels=['NotPrawn','Prawns']
In [33]: image_path='Prawn.jpeg'
         print(image_path)
         Prawn.jpeg
In [34]: image=cv2.imread(image_path)
         image=cv2.cvtColor(image,cv2.COLOR BGR2RGB)
         image=cv2.resize(image,(128,128))
         plt.imshow(image)
         plt.title(label='Input Image')
         plt.axis('off')
         plt.show()
```

Input Image



```
In [35]: image=np.array(image)
          image=image/255.0
          image=np.expand_dims(image,axis=0)
          print(image.shape)
          (1, 128, 128, 3)
          model_prediction = model.predict(image)
In [36]:
          model_class = np.argmax(model_prediction[0])
model_label = class_labels[model_class]
          print(f"Classified as: {model label}")
                                    - 11s 11s/step
          1/1
          Classified as: Prawns
In [37]: image_path='fish.jpg'
          print(image_path)
          fish.jpg
In [38]: image=cv2.imread(image path)
          image=cv2.cvtColor(image,cv2.COLOR_BGR2RGB)
          image=cv2.resize(image,(128,128))
          plt.imshow(image)
          plt.title(label='Input Image')
          plt.axis('off')
          plt.show()
```

Input Image



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