Usando el modelo VGG16:

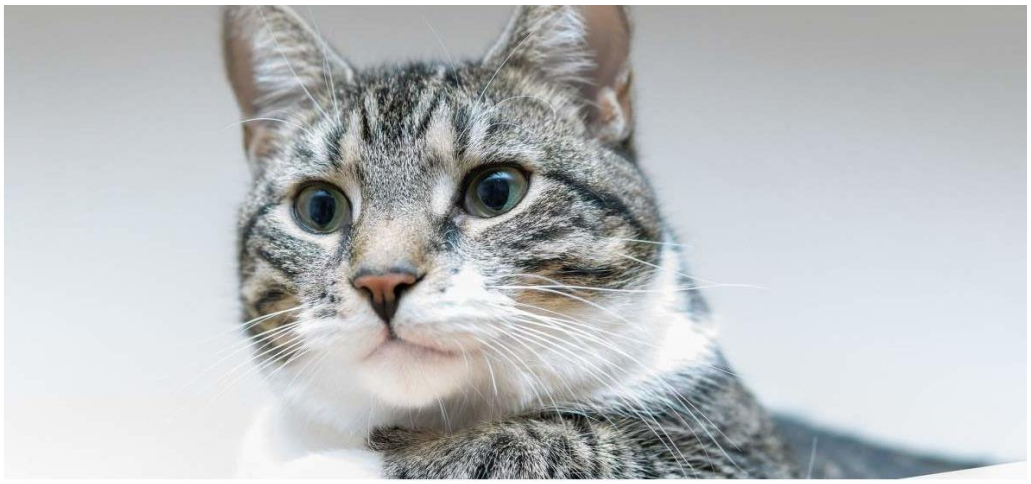
```
[34] base_model = keras.applications.VGG16(
         include_top=False,
         weights="imagenet",
         input_tensor=None,
         input_shape=(150,150,3),
     )
     base_model.trainable = False
```

```
Downloading data from https://storage.googleapis.com/tensorflow/keras-applications/vgg16/vgg16_weights_tf_dim_ordering_tf_kernels_notop.h5
58892288/58889256 [==============================] - 1s 0us/step
58900480/58889256 [==============================] - 1s 0us/step
```

```
[35]
     inputs = keras.Input(shape = (150,150,3))
     x = tf.keras.applications.vgg16.preprocess_input(inputs)
     x = base_model(x, training=False)
     x = keras.layers.GlobalAveragePooling2D()(x)
     x = keras.layers.Dropout(0.2)(x)
     outputs = keras.layers.Dense(1)(x)
     model = keras.Model(inputs,outputs)
```

Pruebas:

dog prob 0.999997615814209, cat prob 2.384185791015625e-06



dog prob 1.5615548691000559e-16, cat prob 1.0

Usando el modelo ResNet:

```
[40] base_model = keras.applications.ResNet50(
         include_top=False,
         weights="imagenet",
         input_shape=(150,150,3),
     )
     base_model.trainable = False
```

```
Downloading data from https://storage.googleapis.com/tensorflow/keras-applications/resnet/resnet50_weights_tf_dim_ordering_tf_kernels_notop.h5
94773248/94765736 [==============================] - 1s 0us/step
94781440/94765736 [==============================] - 1s 0us/step
```

```
inputs = keras.Input(shape = (150,150,3))
x = tf.keras.applications.resnet.preprocess_input(inputs)
x = base_model(x, training=False)
x = keras.layers.GlobalAveragePooling2D()(x)
x = keras.layers.Dropout(0.2)(x)
outputs = keras.layers.Dense(1)(x)
model = keras.Model(inputs,outputs)
```

Pruebas:

dog prob 0.994325578212738, cat prob 0.005674421787261963

dog prob 0.0008404254913330078, cat prob 0.999159574508667