

```
In [1]: from __future__ import absolute_import, division, print_function
import numpy as np # linear algebra
import pandas as pd # data processing, CSV file I/O (e.g. pd.read_csv)
import tensorflow as tf
import cv2
import matplotlib.pyplot as plt
import seaborn as sns
from PIL import Image
import os
#print(os.listdir("../input/cell_images/cell_images"))
```

```
In [2]: print(os.listdir('D:\data analysis\kaggle\cell-images-for-detecting-malaria\cell_images'))
```

['Parasitized', 'Uninfected']

```
In [3]: infected = os.listdir("D:\\data analysis\\kaggle\\cell-images-for-detecting-malaria\\cell_images\\Parasitized")
uninfected = os.listdir("D:\\data analysis\\kaggle\\cell-images-for-detecting-malaria\\cell_images\\Uninfected")
```

```
In [4]: data = []
labels = []

for i in infected:
    try:

        image = cv2.imread("D:\\data analysis\\kaggle\\cell-images-for-detecting-malaria\\cell_images\\Parasitized\\"+i)
        image_array = Image.fromarray(image , 'RGB')
        resize_img = image_array.resize((50 , 50))
        rotated45 = resize_img.rotate(45)
        rotated75 = resize_img.rotate(75)
        blur = cv2.blur(np.array(resize_img) ,(10,10))
        data.append(np.array(resize_img))
        data.append(np.array(rotated45))
        data.append(np.array(rotated75))
        data.append(np.array(blur))
        labels.append(1)
        labels.append(1)
        labels.append(1)
        labels.append(1)

    except AttributeError:
        print('')

for u in uninfected:
    try:

        image = cv2.imread("D:\\data analysis\\kaggle\\cell-images-for-detecting-malaria\\cell_images\\Uninfected\\"+u)
        image_array = Image.fromarray(image , 'RGB')
        resize_img = image_array.resize((50 , 50))
        rotated45 = resize_img.rotate(45)
        rotated75 = resize_img.rotate(75)
        data.append(np.array(resize_img))
        data.append(np.array(rotated45))
        data.append(np.array(rotated75))
        labels.append(0)
        labels.append(0)
        labels.append(0)

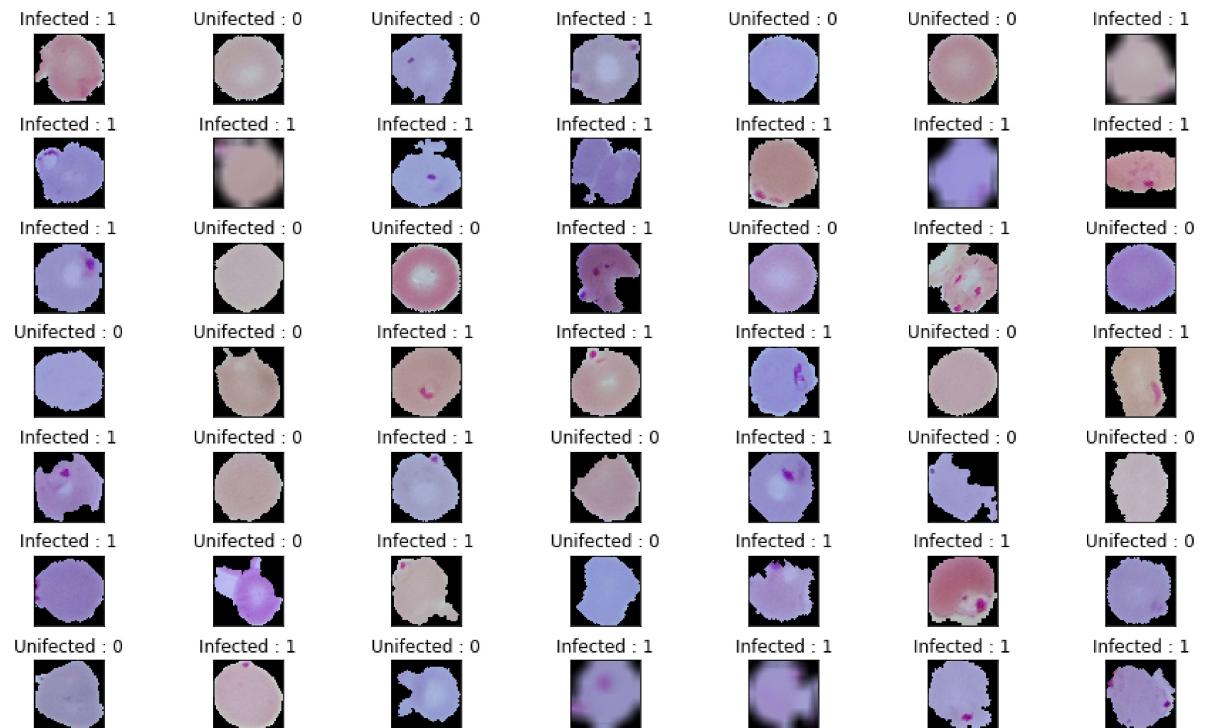
    except AttributeError:
        print('')
```

```
In [5]: cells = np.array(data)
labels = np.array(labels)

np.save('Cells' , cells)
np.save('Labels' , labels)
```

```
In [6]: plt.figure(1 , figsize = (15 , 9))
n = 0
for i in range(49):
    n += 1
    r = np.random.randint(0 , cells.shape[0] , 1)
    plt.subplot(7 , 7 , n)
    plt.subplots_adjust(hspace = 0.5 , wspace = 0.5)
    plt.imshow(cells[r[0]])
    plt.title('{}_ : {}'.format('Infected' if labels[r[0]] == 1 else 'Uninfected' ,
                                labels[r[0]])) )
    plt.xticks([]) , plt.yticks([])

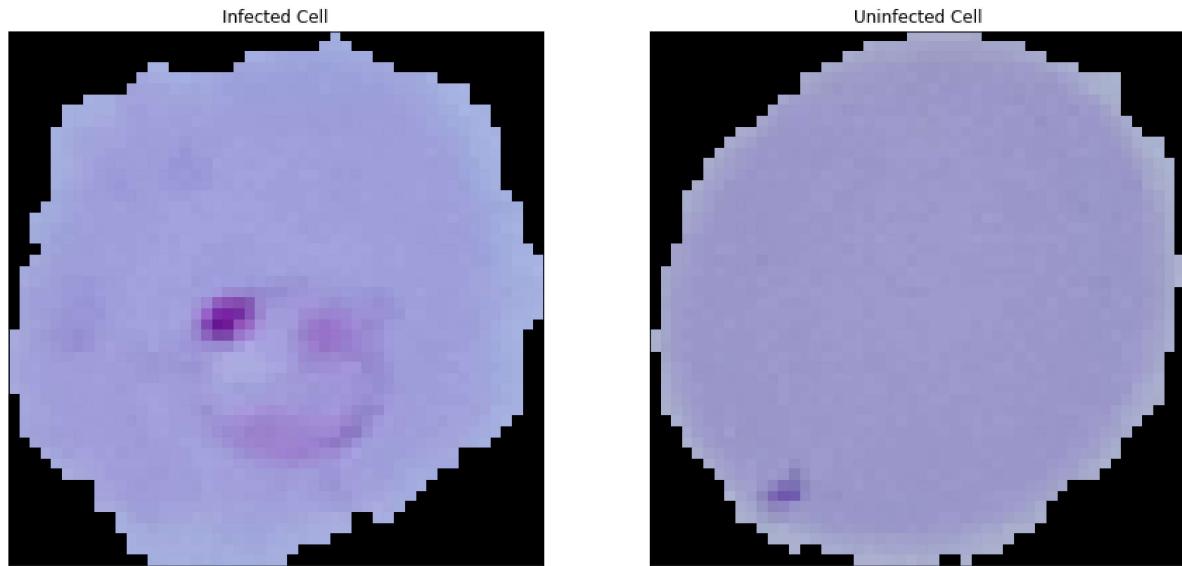
plt.show()
```



```
In [7]: plt.figure(1, figsize = (15 , 7))
plt.subplot(1 , 2 , 1)
plt.imshow(cells[0])
plt.title('Infected Cell')
plt.xticks([]) , plt.yticks([])

plt.subplot(1 , 2 , 2)
plt.imshow(cells[60000])
plt.title('Uninfected Cell')
plt.xticks([]) , plt.yticks([])

plt.show()
```



```
In [8]: n = np.arange(cells.shape[0])
np.random.shuffle(n)
cells = cells[n]
labels = labels[n]
```

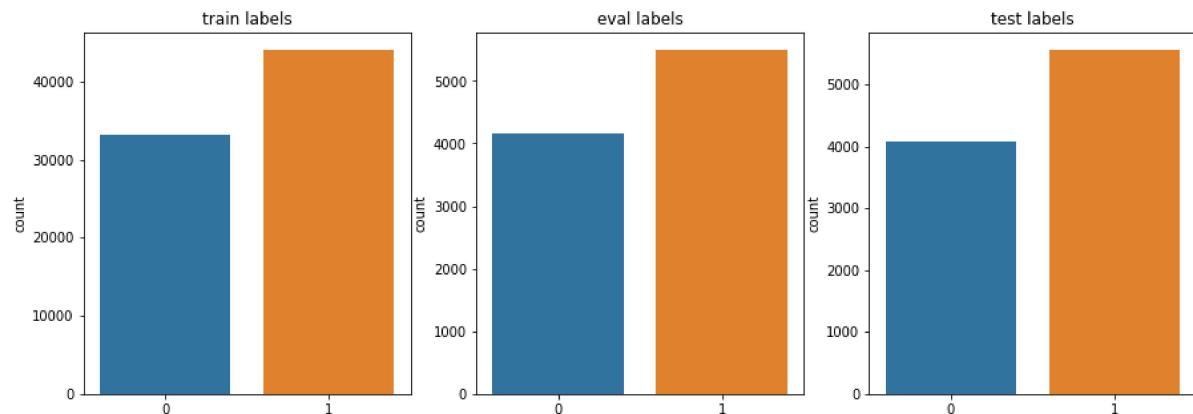
```
In [9]: cells = cells.astype(np.float32)
labels = labels.astype(np.int32)
cells = cells/255
```

```
In [10]: from sklearn.model_selection import train_test_split

train_x , x , train_y , y = train_test_split(cells , labels ,
                                              test_size = 0.2 ,
                                              random_state = 111)

eval_x , test_x , eval_y , test_y = train_test_split(x , y ,
                                              test_size = 0.5 ,
                                              random_state = 111)
```

```
In [11]: plt.figure(1 , figsize = (15 ,5))
n = 0
for z , j in zip([train_y , eval_y , test_y] , ['train labels','eval labels',
'test labels']):
    n += 1
    plt.subplot(1 , 3 , n)
    sns.countplot(x = z )
    plt.title(j)
plt.show()
```



```
In [12]: print('train data shape {} ,eval data shape {} , test data shape {}'.format(tr
ain_x.shape,
eva
tes
t_x.shape))
```

```
train data shape (77162, 50, 50, 3) ,eval data shape (9645, 50, 50, 3) , test
data shape (9646, 50, 50, 3)
```

```
In [13]: tf.reset_default_graph()
def cnn_model_fn(features , labels , mode):
    input_layers = tf.reshape(features['x'] , [-1 , 50 , 50 ,3])
    conv1 = tf.layers.conv2d(
        inputs = input_layers ,
        filters = 50 ,
        kernel_size = [7 , 7],
        padding = 'same',
        activation = tf.nn.relu
    )

    conv2 = tf.layers.conv2d(
        inputs = conv1,
        filters = 90,
        kernel_size = [3 , 3],
        padding = 'valid',
        activation = tf.nn.relu
    )

    conv3 = tf.layers.conv2d(
        inputs = conv2 ,
        filters = 10,
        kernel_size = [5 , 5],
        padding = 'same',
        activation = tf.nn.relu
    )

    pool1 = tf.layers.max_pooling2d(inputs = conv3 , pool_size = [2 , 2] ,
                                    strides = 2 )
    conv4 = tf.layers.conv2d(
        inputs = pool1 ,
        filters = 5,
        kernel_size = [3 , 3],
        padding = 'same',
        activation = tf.nn.relu
    )

    pool2 = tf.layers.max_pooling2d(inputs = conv4 , pool_size = [2 , 2] ,
                                    strides = 2 , padding = 'same')

    pool2_flatten = tf.layers.flatten(pool2)
    fc1 = tf.layers.dense(
        inputs = pool2_flatten,
        units = 2000,
        activation = tf.nn.relu
    )
    fc2 = tf.layers.dense(
        inputs = fc1,
        units = 1000,
        activation = tf.nn.relu
    )
    fc3 = tf.layers.dense(
        inputs = fc2 ,
        units = 500 ,
```

```
activation = tf.nn.relu
)
logits = tf.layers.dense(
    inputs = fc3 ,
    units = 2
)

predictions = {
    'classes': tf.argmax(input = logits , axis = 1),
    'probabilities': tf.nn.softmax(logits , name = 'softmax_tensor')
}

if mode == tf.estimator.ModeKeys.PREDICT:
    return tf.estimator.EstimatorSpec(mode = mode ,
                                        predictions = predictions)

loss = tf.losses.sparse_softmax_cross_entropy(labels = labels ,
                                              logits = logits)

if mode == tf.estimator.ModeKeys.TRAIN:
    optimizer = tf.train.GradientDescentOptimizer(learning_rate = 0.001)
    train_op = optimizer.minimize(loss = loss ,
                                   global_step = tf.train.get_global_step
())
    return tf.estimator.EstimatorSpec(mode = mode ,
                                       loss = loss ,
                                       train_op = train_op
)
    eval_metric_op = { 'accuracy' : tf.metrics.accuracy(labels = labels ,
                                                       predictions = predictions['classes'
])}

return tf.estimator.EstimatorSpec(mode = mode ,
                                 loss = loss ,
                                 eval_metric_ops = eval_metric_op)
```

```
In [14]: malaria_detector = tf.estimator.Estimator(model_fn = cnn_model_fn ,
                                                 model_dir = '/tmp/modelchkpt')
```

```
INFO:tensorflow:Using default config.
INFO:tensorflow:Using config: {'_model_dir': '/tmp/modelchkpt', '_tf_random_seed': None, '_save_summary_steps': 100, '_save_checkpoints_steps': None, '_save_checkpoints_secs': 600, '_session_config': allow_soft_placement: true
graph_options {
    rewrite_options {
        meta_optimizer_iterations: ONE
    }
},
'_keep_checkpoint_max': 5, '_keep_checkpoint_every_n_hours': 10000, '_log_step_count_steps': 100, '_train_distribute': None, '_device_fn': None, '_proto_col': None, '_eval_distribute': None, '_experimental_distribute': None, '_experimental_max_worker_delay_secs': None, '_service': None, '_cluster_spec': <tensorflow.python.training.server_lib.ClusterSpec object at 0x00000150AE8DF4C8>, '_task_type': 'worker', '_task_id': 0, '_global_id_in_cluster': 0, '_master': '', '_evaluation_master': '', '_is_chief': True, '_num_ps_replicas': 0, '_num_worker_replicas': 1}
```

```
In [15]: tensors_to_log = {'probabilities': 'softmax_tensor'}
logging_hook = tf.train.LoggingTensorHook(
    tensors = tensors_to_log , every_n_iter = 50
)
```

```
In [16]: train_input_fn = tf.estimator.inputs.numpy_input_fn(  
    x = {'x': train_x},  
    y = train_y,  
    batch_size = 100 ,  
    num_epochs = None ,  
    shuffle = True  
)  
malaria_detector.train(input_fn = train_input_fn , steps = 1 , hooks = [logging_hook])
```

WARNING:tensorflow:From C:\Users\SARANSH\Anaconda3\envs\saransh\lib\site-packages\tensorflow\python\training\training_util.py:236: Variable.initialized_value (from tensorflow.python.ops.variables) is deprecated and will be removed in a future version.

Instructions for updating:

Use Variable.read_value. Variables in 2.X are initialized automatically both in eager and graph (inside tf.defun) contexts.

WARNING:tensorflow:From C:\Users\SARANSH\Anaconda3\envs\saransh\lib\site-packages\tensorflow_estimator\python\estimator\inputs\queues\feeding_queue_runner.py:62: QueueRunner.__init__ (from tensorflow.python.training.queue_runner_impl) is deprecated and will be removed in a future version.

Instructions for updating:

To construct input pipelines, use the `tf.data` module.

WARNING:tensorflow:From C:\Users\SARANSH\Anaconda3\envs\saransh\lib\site-packages\tensorflow_estimator\python\estimator\inputs\queues\feeding_functions.py:500: add_queue_runner (from tensorflow.python.training.queue_runner_impl) is deprecated and will be removed in a future version.

Instructions for updating:

To construct input pipelines, use the `tf.data` module.

INFO:tensorflow:Calling model_fn.

WARNING:tensorflow:From <ipython-input-13-424ddd03141c>:9: conv2d (from tensorflow.python.layers.convolutional) is deprecated and will be removed in a future version.

Instructions for updating:

Use `tf.keras.layers.Conv2D` instead.

WARNING:tensorflow:From C:\Users\SARANSH\Anaconda3\envs\saransh\lib\site-packages\tensorflow\python\ops\init_ops.py:1251: calling VarianceScaling.__init__ (from tensorflow.python.ops.init_ops) with dtype is deprecated and will be removed in a future version.

Instructions for updating:

Call initializer instance with the dtype argument instead of passing it to the constructor

WARNING:tensorflow:Entity <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150AE8F6408>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTOSITY=10`) and attach the full output. Cause: converting <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150AE8F6408>>: AssertionError: Bad argument number for Name: 3, expecting 4

WARNING: Entity <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150AE8F6408>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTOSITY=10`) and attach the full output. Cause: converting <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150AE8F6408>>: AssertionError: Bad argument number for Name: 3, expecting 4

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attach the full output. Cause: converting <bound method Conv.call of <tensorflow.layers.convolutional.Conv2D object at 0x00000150AE8F6408>>; AssertionException: Bad argument number for Name: 3, expecting 4
WARNING:tensorflow:Entity <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150AE946588>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150AE946588>>; AssertionException: Bad argument number for Name: 3, expecting 4
WARNING: Entity <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150AE946588>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150AE946588>>; AssertionException: Bad argument number for Name: 3, expecting 4
WARNING:tensorflow:From <ipython-input-13-424ddd03141c>:31: max_pooling2d (from tensorflow.python.layers.pooling) is deprecated and will be removed in a future version.

Instructions for updating:

Use keras.layers.MaxPooling2D instead.

WARNING:tensorflow:Entity <bound method Pooling2D.call of <tensorflow.python.layers.pooling.MaxPooling2D object at 0x00000150AE946588>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Pooling2D.call of <tensorflow.python.layers.pooling.MaxPooling2D object at 0x00000150AE946588>>; AssertionException: Bad argument number for Name: 3, expecting 4
WARNING: Entity <bound method Pooling2D.call of <tensorflow.python.layers.pooling.MaxPooling2D object at 0x00000150AE946588>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Pooling2D.call of <tensorflow.python.layers.pooling.MaxPooling2D object at 0x00000150AE946588>>; AssertionException: Bad argument number for Name: 3, expecting 4
WARNING:tensorflow:Entity <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150AE8F6408>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150AE8F6408>>; AssertionException: Bad argument number for Name: 3, expecting 4
WARNING: Entity <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150AE8F6408>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150AE8F6408>>; AssertionException: Bad argument number for Name: 3, expecting 4
WARNING:tensorflow:Entity <bound method Pooling2D.call of <tensorflow.python.layers.pooling.MaxPooling2D object at 0x00000150AE946588>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Pooling2D.call of <tensorflow.python.layers.pooling.MaxPooling2D object at 0x00000150AE946588>>; AssertionException: Bad argument number for Name: 3, expecting 4
WARNING:tensorflow:Entity <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150AE8F6408>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150AE8F6408>>; AssertionException: Bad argument number for Name: 3, expecting 4
WARNING: Entity <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150AE8F6408>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150AE8F6408>>; AssertionException: Bad argument number for Name: 3, expecting 4
WARNING:tensorflow:Entity <bound method Pooling2D.call of <tensorflow.python.layers.pooling.MaxPooling2D object at 0x00000150AE946588>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Pooling2D.call of <tensorflow.python.layers.pooling.MaxPooling2D object at 0x00000150AE946588>>; AssertionException: Bad argument number for Name: 3, expecting 4

```
WARNING: Entity <bound method Pooling2D.call of <tensorflow.python.layers.pooling.MaxPooling2D object at 0x00000150AE946588>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Pooling2D.call of <tensorflow.python.layers.pooling.MaxPooling2D object at 0x00000150AE946588>>: AssertionError: Bad argument number for Name: 3, expecting 4
WARNING:tensorflow:From <ipython-input-13-424ddd03141c>:43: flatten (from tensorflow.python.layers.core) is deprecated and will be removed in a future version.
```

Instructions for updating:

Use keras.layers.flatten instead.

```
WARNING:tensorflow:Entity <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x00000150AE92B748>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x00000150AE92B748>>: AttributeError: module 'gast' has no attribute 'Num'
```

```
WARNING: Entity <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x00000150AE92B748>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x00000150AE92B748>>: AttributeError: module 'gast' has no attribute 'Num'
```

```
WARNING:tensorflow:From <ipython-input-13-424ddd03141c>:47: dense (from tensorflow.python.layers.core) is deprecated and will be removed in a future version.
```

Instructions for updating:

Use keras.layers.dense instead.

```
WARNING:tensorflow:Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000150AE9A1F48>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000150AE9A1F48>>: AssertionError: Bad argument number for Name: 3, expecting 4
```

```
WARNING: Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000150AE9A1F48>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000150AE9A1F48>>: AssertionError: Bad argument number for Name: 3, expecting 4
```

```
WARNING:tensorflow:Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000150AE9A1F48>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000150AE9A1F48>>: AssertionError: Bad argument number for Name: 3, expecting 4
```

```
WARNING: Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000150AE9A1F48>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.py
```

```
thon.layers.core.Dense object at 0x00000150AE9A1F48>>: AssertionError: Bad ar-
gument number for Name: 3, expecting 4
WARNING:tensorflow:Entity <bound method Dense.call of <tensorflow.python.laye-
rs.core.Dense object at 0x00000150DA251188>> could not be transformed and wil-
l be executed as-is. Please report this to the Autograph team. When filing t-
he bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTOSITY=10`) a-
nd attach the full output. Cause: converting <bound method Dense.call of <ten-
sorflow.python.layers.core.Dense object at 0x00000150DA251188>>: AssertionEr-
ror: Bad argument number for Name: 3, expecting 4
WARNING: Entity <bound method Dense.call of <tensorflow.python.layers.core.De-
nse object at 0x00000150DA251188>> could not be transformed and will be execu-
ted as-is. Please report this to the Autograph team. When filing the bug, se-
t the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTOSITY=10`) and attach
the full output. Cause: converting <bound method Dense.call of <tensorflow.py-
thon.layers.core.Dense object at 0x00000150DA251188>>: AssertionEr-
ror: Bad argument number for Name: 3, expecting 4
WARNING:tensorflow:Entity <bound method Dense.call of <tensorflow.python.laye-
rs.core.Dense object at 0x00000150DA251188>> could not be transformed and wil-
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nd attach the full output. Cause: converting <bound method Dense.call of <ten-
sorflow.python.layers.core.Dense object at 0x00000150DA251188>>: AssertionEr-
ror: Bad argument number for Name: 3, expecting 4
WARNING: Entity <bound method Dense.call of <tensorflow.python.layers.core.De-
nse object at 0x00000150DA251188>> could not be transformed and will be execu-
ted as-is. Please report this to the Autograph team. When filing the bug, se-
t the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTOSITY=10`) and attach
the full output. Cause: converting <bound method Dense.call of <tensorflow.py-
thon.layers.core.Dense object at 0x00000150DA251188>>: AssertionEr-
ror: Bad argument number for Name: 3, expecting 4
WARNING:tensorflow:From C:\Users\SARANSH\Anaconda3\envs\saransh\lib\site-pac-
ages\tensorflow\python\ops\losses\losses_impl.py:121: add_dispatch_support.<l-
ocals>.wrapper (from tensorflow.python.ops.array_ops) is deprecated and will
be removed in a future version.
```

Instructions for updating:

Use tf.where in 2.0, which has the same broadcast rule as np.where

INFO:tensorflow:Done calling model_fn.

INFO:tensorflow>Create CheckpointSaverHook.

INFO:tensorflow:Graph was finalized.

```
WARNING:tensorflow:From C:\Users\SARANSH\Anaconda3\envs\saransh\lib\site-pac-
ages\tensorflow\python\training\saver.py:1276: checkpoint_exists (from ten-
sorflow.python.training.checkpoint_management) is deprecated and will be removed
in a future version.
```

Instructions for updating:

Use standard file APIs to check for files with this prefix.

INFO:tensorflow:Restoring parameters from /tmp/modelchkpt\model.ckpt-10001

```
WARNING:tensorflow:From C:\Users\SARANSH\Anaconda3\envs\saransh\lib\site-pac-
ages\tensorflow\python\training\saver.py:1066: get_checkpoint_mtimes (from te-
nsorflow.python.training.checkpoint_management) is deprecated and will be rem-
oved in a future version.
```

Instructions for updating:

Use standard file utilities to get mtimes.

INFO:tensorflow:Running local_init_op.

INFO:tensorflow:Done running local_init_op.

```
WARNING:tensorflow:From C:\Users\SARANSH\Anaconda3\envs\saransh\lib\site-pac-
ages\tensorflow\python\training\monitored_session.py:875: start_queue_runners
(from tensorflow.python.training.queue_runner_impl) is deprecated and will be
```

removed in a future version.

Instructions for updating:

To construct input pipelines, use the `tf.data` module.

INFO:tensorflow:Saving checkpoints for 10001 into /tmp/modelchkpt\model.ckpt.

INFO:tensorflow:probabilities = [[0.01431797 0.98568195]

[0.646271 0.35372898]

[0.05407832 0.9459217]

[0.90795225 0.09204772]

[0.5512039 0.44879606]

[0.81645083 0.1835492]

[0.01870188 0.9812981]

[0.54075766 0.45924234]

[0.13647705 0.86352295]

[0.01295674 0.9870432]

[0.05692862 0.9430714]

[0.18463793 0.81536204]

[0.02228348 0.9777165]

[0.7141287 0.28587133]

[0.02981673 0.97018325]

[0.83774585 0.16225415]

[0.16627519 0.8337248]

[0.01423507 0.9857649]

[0.03758446 0.9624155]

[0.28738648 0.7126135]

[0.41187087 0.5881291]

[0.390585 0.609415]

[0.8100024 0.18999766]

[0.5157664 0.4842336]

[0.83060056 0.1693994]

[0.49680147 0.50319856]

[0.30872872 0.6912713]

[0.86599326 0.13400677]

[0.7123587 0.2876413]

[0.40378138 0.59621865]

[0.77805763 0.22194234]

[0.04624617 0.95375377]

[0.26443008 0.73556995]

[0.1715021 0.8284979]

[0.5960578 0.4039423]

[0.02724269 0.97275734]

[0.5507497 0.4492503]

[0.00897105 0.9910289]

[0.64316666 0.35683334]

[0.73459846 0.26540157]

[0.66846466 0.3315353]

[0.05014921 0.94985074]

[0.7567224 0.24327762]

[0.23479603 0.76520395]

[0.5805171 0.4194829]

[0.8327422 0.16725776]

[0.02638823 0.9736118]

[0.03939228 0.96060777]

[0.74209094 0.25790906]

[0.37671515 0.6232849]

[0.22071303 0.779287]

[0.3493139 0.650686]

[0.04763884 0.9523612]

```
[0.479242  0.520758  ]
[0.02212687 0.9778731 ]
[0.25537544 0.74462456]
[0.01784849 0.9821515 ]
[0.02450588 0.97549415]
[0.4302814  0.56971866]
[0.00287556 0.9971244 ]
[0.5746456  0.42535445]
[0.68150234 0.31849766]
[0.6784463  0.3215537 ]
[0.7044478  0.29555222]
[0.04576969 0.9542303 ]
[0.4387058  0.5612942 ]
[0.07743174 0.92256826]
[0.00059575 0.9994043 ]
[0.6723008  0.32769918]
[0.55172604 0.44827402]
[0.0014331  0.9985669 ]
[0.19581275 0.8041873 ]
[0.331235   0.668765  ]
[0.91700935 0.08299064]
[0.00389152 0.9961085 ]
[0.8479618  0.15203814]
[0.65467584 0.34532413]
[0.36281446 0.6371856 ]
[0.33740807 0.662592  ]
[0.04013191 0.95986813]
[0.36054435 0.6394556 ]
[0.02464187 0.9753582 ]
[0.18729219 0.8127078 ]
[0.03361369 0.9663863 ]
[0.87393606 0.12606391]
[0.0047232  0.9952768 ]
[0.16631328 0.8336867 ]
[0.00491465 0.9950853 ]
[0.05613954 0.9438605 ]
[0.66157454 0.3384255 ]
[0.81304383 0.18695617]
[0.28104144 0.71895856]
[0.02646874 0.97353125]
[0.22747965 0.7725203 ]
[0.17771223 0.82228774]
[0.3163375  0.6836625 ]
[0.8431937  0.15680628]
[0.02117447 0.9788255 ]
[0.20605916 0.7939409 ]
[0.01988847 0.98011154]]  
INFO:tensorflow:loss = 0.46254182, step = 10001  
INFO:tensorflow:Saving checkpoints for 10002 into /tmp/modelchkpt\model.ckpt.  
INFO:tensorflow:Loss for final step: 0.46254182.
```

Out[16]: <tensorflow_estimator.python.estimator.estimator.Estimator at 0x150ae918d08>

```
In [17]: malaria_detector.train(input_fn = train_input_fn , steps = 10000)
```

```
INFO:tensorflow:Calling model_fn.  
WARNING:tensorflow:Entity <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150FFBB2C88>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150FFBB2C88>>: AssertionError: Bad argument number for Name: 3, expecting 4  
WARNING: Entity <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150FFBB2C88>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150FFBB2C88>>: AssertionError: Bad argument number for Name: 3, expecting 4  
WARNING:tensorflow:Entity <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150AE88F408>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150AE88F408>>: AssertionError: Bad argument number for Name: 3, expecting 4  
WARNING: Entity <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150AE88F408>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150AE88F408>>: AssertionError: Bad argument number for Name: 3, expecting 4  
WARNING:tensorflow:Entity <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150AE8E3C88>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150AE8E3C88>>: AssertionError: Bad argument number for Name: 3, expecting 4  
WARNING: Entity <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150AE8E3C88>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150AE8E3C88>>: AssertionError: Bad argument number for Name: 3, expecting 4  
WARNING:tensorflow:Entity <bound method Pooling2D.call of <tensorflow.python.layers.pooling.MaxPooling2D object at 0x00000150AEAB6E48>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Pooling2D.call of <tensorflow.python.layers.pooling.MaxPooling2D object at 0x00000150AEAB6E48>>: AssertionError: Bad argument number for Name: 3, expecting 4  
WARNING: Entity <bound method Pooling2D.call of <tensorflow.python.layers.pooling.MaxPooling2D object at 0x00000150AEAB6E48>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Pooling2D.call of <tensorflow.python.layers.pooling.MaxPooling2D object at 0x00000150AEAB6E48>>: AssertionError: Bad argument number for Name: 3, expecting 4
```

```
WARNING:tensorflow:Entity <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150AE91FB48>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150AE91FB48>>: AssertionError: Bad argument number for Name: 3, expecting 4
WARNING: Entity <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150AE91FB48>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150AE91FB48>>: AssertionError: Bad argument number for Name: 3, expecting 4
WARNING:tensorflow:Entity <bound method Pooling2D.call of <tensorflow.python.layers.pooling.MaxPooling2D object at 0x00000150AEA82A08>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Pooling2D.call of <tensorflow.python.layers.pooling.MaxPooling2D object at 0x00000150AEA82A08>>: AssertionError: Bad argument number for Name: 3, expecting 4
WARNING: Entity <bound method Pooling2D.call of <tensorflow.python.layers.pooling.MaxPooling2D object at 0x00000150AEA82A08>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Pooling2D.call of <tensorflow.python.layers.pooling.MaxPooling2D object at 0x00000150AEA82A08>>: AssertionError: Bad argument number for Name: 3, expecting 4
WARNING:tensorflow:Entity <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x00000151D6C75908>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x00000151D6C75908>>: AttributeError: module 'gast' has no attribute 'Num'
WARNING: Entity <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x00000151D6C75908>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x00000151D6C75908>>: AttributeError: module 'gast' has no attribute 'Num'
WARNING:tensorflow:Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000151D6C75908>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000151D6C75908>>: AssertionError: Bad argument number for Name: 3, expecting 4
WARNING: Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000151D6C75908>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000151D6C75908>>: AssertionError: Bad argument number for Name: 3, expecting 4
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```

```
rs.core.Dense object at 0x00000151D6C75908>> could not be transformed and will be executed as-is. Please report this to the AutoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_Verbosity=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000151D6C75908>>: AssertionError: Bad argument number for Name: 3, expecting 4
WARNING: Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000151D6C75908>> could not be transformed and will be executed as-is. Please report this to the AutoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_Verbosity=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000151D6C75908>>: AssertionError: Bad argument number for Name: 3, expecting 4
WARNING:tensorflow:Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000151D6C75908>> could not be transformed and will be executed as-is. Please report this to the AutoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_Verbosity=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000151D6C75908>>: AssertionError: Bad argument number for Name: 3, expecting 4
WARNING:tensorflow:Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000151D6C75908>> could not be transformed and will be executed as-is. Please report this to the AutoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_Verbosity=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000151D6C75908>>: AssertionError: Bad argument number for Name: 3, expecting 4
WARNING:tensorflow:Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000151D6C75908>> could not be transformed and will be executed as-is. Please report this to the AutoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_Verbosity=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000151D6C75908>>: AssertionError: Bad argument number for Name: 3, expecting 4
INFO:tensorflow:Done calling model_fn.
INFO:tensorflow>Create CheckpointSaverHook.
INFO:tensorflow:Graph was finalized.
INFO:tensorflow:Restoring parameters from /tmp/modelchkpt\model.ckpt-10002
INFO:tensorflow:Running local_init_op.
INFO:tensorflow:Done running local_init_op.
INFO:tensorflow:Saving checkpoints for 10002 into /tmp/modelchkpt\model.ckpt.
INFO:tensorflow:loss = 0.3531644, step = 10002
INFO:tensorflow:global_step/sec: 24.5682
INFO:tensorflow:loss = 0.40717822, step = 10102 (4.073 sec)
INFO:tensorflow:global_step/sec: 25.1275
INFO:tensorflow:loss = 0.33816257, step = 10202 (3.978 sec)
INFO:tensorflow:global_step/sec: 25.0947
INFO:tensorflow:loss = 0.3657097, step = 10302 (3.985 sec)
INFO:tensorflow:global_step/sec: 25.2385
INFO:tensorflow:loss = 0.33506092, step = 10402 (3.961 sec)
```

```
INFO:tensorflow:global_step/sec: 24.9498
INFO:tensorflow:loss = 0.37229943, step = 10502 (4.009 sec)
INFO:tensorflow:global_step/sec: 24.9466
INFO:tensorflow:loss = 0.41200376, step = 10602 (4.008 sec)
INFO:tensorflow:global_step/sec: 24.9824
INFO:tensorflow:loss = 0.3017004, step = 10702 (4.005 sec)
INFO:tensorflow:global_step/sec: 25.0395
INFO:tensorflow:loss = 0.30000207, step = 10802 (3.994 sec)
INFO:tensorflow:global_step/sec: 25.0093
INFO:tensorflow:loss = 0.35473594, step = 10902 (3.997 sec)
INFO:tensorflow:global_step/sec: 24.7813
INFO:tensorflow:loss = 0.30975989, step = 11002 (4.037 sec)
INFO:tensorflow:global_step/sec: 24.7938
INFO:tensorflow:loss = 0.2796476, step = 11102 (4.032 sec)
INFO:tensorflow:global_step/sec: 24.9273
INFO:tensorflow:loss = 0.23799366, step = 11202 (4.013 sec)
INFO:tensorflow:global_step/sec: 24.8113
INFO:tensorflow:loss = 0.36533475, step = 11302 (4.029 sec)
INFO:tensorflow:global_step/sec: 24.5919
INFO:tensorflow:loss = 0.37539783, step = 11402 (4.081 sec)
INFO:tensorflow:global_step/sec: 24.6737
INFO:tensorflow:loss = 0.37513635, step = 11502 (4.037 sec)
INFO:tensorflow:global_step/sec: 24.895
INFO:tensorflow:loss = 0.28159228, step = 11602 (4.017 sec)
INFO:tensorflow:global_step/sec: 24.8186
INFO:tensorflow:loss = 0.3130332, step = 11702 (4.031 sec)
INFO:tensorflow:global_step/sec: 24.8076
INFO:tensorflow:loss = 0.30589974, step = 11802 (4.030 sec)
INFO:tensorflow:global_step/sec: 24.8715
INFO:tensorflow:loss = 0.27402747, step = 11902 (4.022 sec)
INFO:tensorflow:global_step/sec: 24.6813
INFO:tensorflow:loss = 0.24472678, step = 12002 (4.051 sec)
INFO:tensorflow:global_step/sec: 24.6904
INFO:tensorflow:loss = 0.28896472, step = 12102 (4.051 sec)
INFO:tensorflow:global_step/sec: 24.8324
INFO:tensorflow:loss = 0.3242085, step = 12202 (4.027 sec)
INFO:tensorflow:global_step/sec: 24.8835
INFO:tensorflow:loss = 0.21568857, step = 12302 (4.018 sec)
INFO:tensorflow:global_step/sec: 24.865
INFO:tensorflow:loss = 0.30029064, step = 12402 (4.022 sec)
INFO:tensorflow:global_step/sec: 24.734
INFO:tensorflow:loss = 0.20606735, step = 12502 (4.043 sec)
INFO:tensorflow:global_step/sec: 24.7684
INFO:tensorflow:loss = 0.23285164, step = 12602 (4.037 sec)
INFO:tensorflow:global_step/sec: 24.7652
INFO:tensorflow:loss = 0.28784478, step = 12702 (4.039 sec)
INFO:tensorflow:global_step/sec: 24.6133
INFO:tensorflow:loss = 0.2863392, step = 12802 (4.064 sec)
INFO:tensorflow:global_step/sec: 24.7276
INFO:tensorflow:loss = 0.2387241, step = 12902 (4.042 sec)
INFO:tensorflow:global_step/sec: 24.7546
INFO:tensorflow:loss = 0.21034032, step = 13002 (4.040 sec)
INFO:tensorflow:global_step/sec: 24.7054
INFO:tensorflow:loss = 0.20786878, step = 13102 (4.049 sec)
INFO:tensorflow:global_step/sec: 24.6539
INFO:tensorflow:loss = 0.27655646, step = 13202 (4.056 sec)
INFO:tensorflow:global_step/sec: 24.4735
```

```
INFO:tensorflow:loss = 0.25341895, step = 13302 (4.085 sec)
INFO:tensorflow:global_step/sec: 24.5623
INFO:tensorflow:loss = 0.21672703, step = 13402 (4.072 sec)
INFO:tensorflow:global_step/sec: 24.5532
INFO:tensorflow:loss = 0.25767472, step = 13502 (4.073 sec)
INFO:tensorflow:global_step/sec: 24.2574
INFO:tensorflow:loss = 0.23485687, step = 13602 (4.122 sec)
INFO:tensorflow:global_step/sec: 24.4058
INFO:tensorflow:loss = 0.21269628, step = 13702 (4.097 sec)
INFO:tensorflow:global_step/sec: 24.3973
INFO:tensorflow:loss = 0.306104, step = 13802 (4.099 sec)
INFO:tensorflow:global_step/sec: 24.2728
INFO:tensorflow:loss = 0.20518672, step = 13902 (4.120 sec)
INFO:tensorflow:global_step/sec: 24.2989
INFO:tensorflow:loss = 0.2273156, step = 14002 (4.115 sec)
INFO:tensorflow:global_step/sec: 23.9541
INFO:tensorflow:loss = 0.15474814, step = 14102 (4.175 sec)
INFO:tensorflow:global_step/sec: 24.0488
INFO:tensorflow:loss = 0.2625977, step = 14202 (4.158 sec)
INFO:tensorflow:global_step/sec: 24.1448
INFO:tensorflow:loss = 0.15415704, step = 14302 (4.140 sec)
INFO:tensorflow:global_step/sec: 24.0919
INFO:tensorflow:loss = 0.24190278, step = 14402 (4.152 sec)
INFO:tensorflow:global_step/sec: 23.8567
INFO:tensorflow:loss = 0.21451855, step = 14502 (4.192 sec)
INFO:tensorflow:global_step/sec: 24.4583
INFO:tensorflow:loss = 0.22842225, step = 14602 (4.088 sec)
INFO:tensorflow:global_step/sec: 24.4277
INFO:tensorflow:loss = 0.19263937, step = 14702 (4.095 sec)
INFO:tensorflow:global_step/sec: 24.1777
INFO:tensorflow:loss = 0.23448344, step = 14802 (4.136 sec)
INFO:tensorflow:global_step/sec: 24.1255
INFO:tensorflow:loss = 0.20230156, step = 14902 (4.145 sec)
INFO:tensorflow:global_step/sec: 24.3408
INFO:tensorflow:loss = 0.33996314, step = 15002 (4.108 sec)
INFO:tensorflow:global_step/sec: 24.1442
INFO:tensorflow:loss = 0.14054367, step = 15102 (4.141 sec)
INFO:tensorflow:global_step/sec: 24.2573
INFO:tensorflow:loss = 0.28936845, step = 15202 (4.122 sec)
INFO:tensorflow:global_step/sec: 24.2397
INFO:tensorflow:loss = 0.15835075, step = 15302 (4.126 sec)
INFO:tensorflow:global_step/sec: 24.1441
INFO:tensorflow:loss = 0.13471965, step = 15402 (4.142 sec)
INFO:tensorflow:global_step/sec: 24.0436
INFO:tensorflow:loss = 0.15287949, step = 15502 (4.158 sec)
INFO:tensorflow:global_step/sec: 24.0762
INFO:tensorflow:loss = 0.25767636, step = 15602 (4.154 sec)
INFO:tensorflow:global_step/sec: 23.7639
INFO:tensorflow:loss = 0.13371077, step = 15702 (4.207 sec)
INFO:tensorflow:global_step/sec: 24.1576
INFO:tensorflow:loss = 0.24595553, step = 15802 (4.141 sec)
INFO:tensorflow:global_step/sec: 24.4366
INFO:tensorflow:loss = 0.19341521, step = 15902 (4.090 sec)
INFO:tensorflow:global_step/sec: 24.4007
INFO:tensorflow:loss = 0.2519474, step = 16002 (4.099 sec)
INFO:tensorflow:global_step/sec: 24.1106
INFO:tensorflow:loss = 0.18249395, step = 16102 (4.148 sec)
```

```
INFO:tensorflow:global_step/sec: 24.0163
INFO:tensorflow:loss = 0.22450367, step = 16202 (4.164 sec)
INFO:tensorflow:global_step/sec: 23.9841
INFO:tensorflow:loss = 0.11304905, step = 16302 (4.169 sec)
INFO:tensorflow:global_step/sec: 24.0668
INFO:tensorflow:loss = 0.15933837, step = 16402 (4.154 sec)
INFO:tensorflow:global_step/sec: 23.8884
INFO:tensorflow:loss = 0.167001, step = 16502 (4.187 sec)
INFO:tensorflow:global_step/sec: 23.9626
INFO:tensorflow:loss = 0.16792625, step = 16602 (4.172 sec)
INFO:tensorflow:global_step/sec: 24.3002
INFO:tensorflow:loss = 0.1559091, step = 16702 (4.116 sec)
INFO:tensorflow:global_step/sec: 24.0342
INFO:tensorflow:loss = 0.09029122, step = 16802 (4.161 sec)
INFO:tensorflow:global_step/sec: 24.2128
INFO:tensorflow:loss = 0.18105654, step = 16902 (4.130 sec)
INFO:tensorflow:global_step/sec: 24.2937
INFO:tensorflow:loss = 0.14474905, step = 17002 (4.115 sec)
INFO:tensorflow:global_step/sec: 24.3099
INFO:tensorflow:loss = 0.12261029, step = 17102 (4.114 sec)
INFO:tensorflow:global_step/sec: 24.3008
INFO:tensorflow:loss = 0.082772836, step = 17202 (4.115 sec)
INFO:tensorflow:global_step/sec: 24.5124
INFO:tensorflow:loss = 0.15922095, step = 17302 (4.081 sec)
INFO:tensorflow:global_step/sec: 24.5069
INFO:tensorflow:loss = 0.1953723, step = 17402 (4.080 sec)
INFO:tensorflow:global_step/sec: 24.5514
INFO:tensorflow:loss = 0.18789391, step = 17502 (4.072 sec)
INFO:tensorflow:global_step/sec: 24.5213
INFO:tensorflow:loss = 0.256144, step = 17602 (4.078 sec)
INFO:tensorflow:global_step/sec: 24.527
INFO:tensorflow:loss = 0.30581015, step = 17702 (4.077 sec)
INFO:tensorflow:global_step/sec: 24.5694
INFO:tensorflow:loss = 0.19092752, step = 17802 (4.070 sec)
INFO:tensorflow:global_step/sec: 24.5934
INFO:tensorflow:loss = 0.14132811, step = 17902 (4.066 sec)
INFO:tensorflow:global_step/sec: 24.5453
INFO:tensorflow:loss = 0.0895001, step = 18002 (4.075 sec)
INFO:tensorflow:global_step/sec: 24.5754
INFO:tensorflow:loss = 0.14224483, step = 18102 (4.069 sec)
INFO:tensorflow:global_step/sec: 24.5752
INFO:tensorflow:loss = 0.108734734, step = 18202 (4.069 sec)
INFO:tensorflow:global_step/sec: 24.5996
INFO:tensorflow:loss = 0.19239253, step = 18302 (4.064 sec)
INFO:tensorflow:global_step/sec: 24.3934
INFO:tensorflow:loss = 0.110891074, step = 18402 (4.099 sec)
INFO:tensorflow:global_step/sec: 24.3648
INFO:tensorflow:loss = 0.20042858, step = 18502 (4.104 sec)
INFO:tensorflow:global_step/sec: 24.2894
INFO:tensorflow:loss = 0.13498683, step = 18602 (4.118 sec)
INFO:tensorflow:global_step/sec: 24.3286
INFO:tensorflow:loss = 0.13775511, step = 18702 (4.110 sec)
INFO:tensorflow:global_step/sec: 24.3008
INFO:tensorflow:loss = 0.26975867, step = 18802 (4.116 sec)
INFO:tensorflow:global_step/sec: 24.3338
INFO:tensorflow:loss = 0.29268548, step = 18902 (4.107 sec)
INFO:tensorflow:global_step/sec: 24.3382
```

```
INFO:tensorflow:loss = 0.21880493, step = 19002 (4.110 sec)
INFO:tensorflow:global_step/sec: 24.283
INFO:tensorflow:loss = 0.24946396, step = 19102 (4.117 sec)
INFO:tensorflow:global_step/sec: 24.0628
INFO:tensorflow:loss = 0.15550944, step = 19202 (4.157 sec)
INFO:tensorflow:global_step/sec: 24.1684
INFO:tensorflow:loss = 0.12804514, step = 19302 (4.138 sec)
INFO:tensorflow:global_step/sec: 24.4269
INFO:tensorflow:loss = 0.20836502, step = 19402 (4.093 sec)
INFO:tensorflow:global_step/sec: 24.4224
INFO:tensorflow:loss = 0.20392668, step = 19502 (4.096 sec)
INFO:tensorflow:global_step/sec: 24.3541
INFO:tensorflow:loss = 0.16182443, step = 19602 (4.106 sec)
INFO:tensorflow:global_step/sec: 24.2359
INFO:tensorflow:loss = 0.17569454, step = 19702 (4.126 sec)
INFO:tensorflow:global_step/sec: 24.4642
INFO:tensorflow:loss = 0.08576319, step = 19802 (4.087 sec)
INFO:tensorflow:global_step/sec: 24.5401
INFO:tensorflow:loss = 0.1263476, step = 19902 (4.076 sec)
INFO:tensorflow:Saving checkpoints for 20002 into /tmp/modelchkpt\model.ckpt.
INFO:tensorflow:Loss for final step: 0.15919308.
```

Out[17]: <tensorflow_estimator.python.estimator.estimator.Estimator at 0x150ae918d08>

```
In [18]: eval_input_fn = tf.estimator.inputs.numpy_input_fn(  
    x = {'x': eval_x},  
    y = eval_y ,  
    num_epochs = 1 ,  
    shuffle = False  
)  
eval_results = malaria_detector.evaluate(input_fn = eval_input_fn)  
print(eval_results)
```

```
INFO:tensorflow:Calling model_fn.  
WARNING:tensorflow:Entity <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150FFBB2048>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150FFBB2048>>: AssertionError: Bad argument number for Name: 3, expecting 4  
WARNING: Entity <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150FFBB2048>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150FFBB2048>>: AssertionError: Bad argument number for Name: 3, expecting 4  
WARNING:tensorflow:Entity <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150FFBB2048>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150FFBB2048>>: AssertionError: Bad argument number for Name: 3, expecting 4  
WARNING: Entity <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150FFBB2048>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150FFBB2048>>: AssertionError: Bad argument number for Name: 3, expecting 4  
WARNING:tensorflow:Entity <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150FFBB2048>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150FFBB2048>>: AssertionError: Bad argument number for Name: 3, expecting 4  
WARNING: Entity <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150FFBB2048>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150FFBB2048>>: AssertionError: Bad argument number for Name: 3, expecting 4  
WARNING:tensorflow:Entity <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000151D70CF548>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000151D70CF548>>: AssertionError: Bad argument number for Name: 3, expecting 4  
WARNING: Entity <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000151D70CF548>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000151D70CF548>>: AssertionError: Bad argument number for Name: 3, expecting 4  
WARNING:tensorflow:Entity <bound method Pooling2D.call of <tensorflow.python.layers.pooling.MaxPooling2D object at 0x00000150BD021208>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Pooling2D.call of <tensorflow.python.layers.pooling.MaxPooling2D object at 0x00000150BD021208>>: AssertionError: Bad argument number for Name: 3, expecting 4  
WARNING: Entity <bound method Pooling2D.call of <tensorflow.python.layers.pooling.MaxPooling2D object at 0x00000150BD021208>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Pooling2D.call of <tensorflow.python.layers.pooling.MaxPooling2D object at 0x00000150BD021208>>: AssertionError: Bad argument number for Name: 3, expecting 4
```

```
WARNING:tensorflow:Entity <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150CB0E8BC8>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150CB0E8BC8>>: AssertionError: Bad argument number for Name: 3, expecting 4
WARNING: Entity <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150CB0E8BC8>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150CB0E8BC8>>: AssertionError: Bad argument number for Name: 3, expecting 4
WARNING:tensorflow:Entity <bound method Pooling2D.call of <tensorflow.python.layers.pooling.MaxPooling2D object at 0x00000151D70E0688>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Pooling2D.call of <tensorflow.python.layers.pooling.MaxPooling2D object at 0x00000151D70E0688>>: AssertionError: Bad argument number for Name: 3, expecting 4
WARNING: Entity <bound method Pooling2D.call of <tensorflow.python.layers.pooling.MaxPooling2D object at 0x00000151D70E0688>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Pooling2D.call of <tensorflow.python.layers.pooling.MaxPooling2D object at 0x00000151D70E0688>>: AssertionError: Bad argument number for Name: 3, expecting 4
WARNING:tensorflow:Entity <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x00000150BD072D88>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x00000150BD072D88>>: AttributeError: module 'gast' has no attribute 'Num'
WARNING: Entity <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x00000150BD072D88>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x00000150BD072D88>>: AttributeError: module 'gast' has no attribute 'Num'
WARNING:tensorflow:Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000150BD072D88>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000150BD072D88>>: AssertionError: Bad argument number for Name: 3, expecting 4
WARNING: Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000150BD072D88>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000150BD072D88>>: AssertionError: Bad argument number for Name: 3, expecting 4
WARNING:tensorflow:Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000150BD072D88>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000150BD072D88>>: AssertionError: Bad argument number for Name: 3, expecting 4
```

```
rs.core.Dense object at 0x00000150BD072D88>> could not be transformed and will be executed as-is. Please report this to the AutoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_Verbosity=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000150BD072D88>>: AssertionError: Bad argument number for Name: 3, expecting 4
WARNING: Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000150BD072D88>> could not be transformed and will be executed as-is. Please report this to the AutoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_Verbosity=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000150BD072D88>>: AssertionError: Bad argument number for Name: 3, expecting 4
WARNING:tensorflow:Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000150BD072D88>> could not be transformed and will be executed as-is. Please report this to the AutoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_Verbosity=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000150BD072D88>>: AssertionError: Bad argument number for Name: 3, expecting 4
WARNING: Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000150BD072D88>> could not be transformed and will be executed as-is. Please report this to the AutoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_Verbosity=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000150BD072D88>>: AssertionError: Bad argument number for Name: 3, expecting 4
WARNING:tensorflow:Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000150BD072D88>> could not be transformed and will be executed as-is. Please report this to the AutoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_Verbosity=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000150BD072D88>>: AssertionError: Bad argument number for Name: 3, expecting 4
WARNING:tensorflow:Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000150BD072D88>> could not be transformed and will be executed as-is. Please report this to the AutoGraph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_Verbosity=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000150BD072D88>>: AssertionError: Bad argument number for Name: 3, expecting 4
INFO:tensorflow:Done calling model_fn.
INFO:tensorflow:Starting evaluation at 2019-10-24T15:02:52Z
INFO:tensorflow:Graph was finalized.
INFO:tensorflow:Restoring parameters from /tmp/modelchkpt\model.ckpt-20002
INFO:tensorflow:Running local_init_op.
INFO:tensorflow:Done running local_init_op.
INFO:tensorflow:Finished evaluation at 2019-10-24-15:02:54
INFO:tensorflow:Saving dict for global step 20002: accuracy = 0.9447382, global_step = 20002, loss = 0.15525046
INFO:tensorflow:Saving 'checkpoint_path' summary for global step 20002: /tmp/modelchkpt\model.ckpt-20002
{'accuracy': 0.9447382, 'loss': 0.15525046, 'global_step': 20002}
```

```
In [26]: pred_input_fn = tf.estimator.inputs.numpy_input_fn(  
    x = {'x' : test_x},  
    y = test_y,  
    num_epochs = 1,  
    shuffle = False  
)  
  
y_pred = malaria_detector.predict(input_fn = pred_input_fn)  
classes = [p['classes'] for p in y_pred]
```

```
INFO:tensorflow:Calling model_fn.  
WARNING:tensorflow:Entity <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000153B61FCF08>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000153B61FCF08>>: AssertionError: Bad argument number for Name: 3, expecting 4  
WARNING: Entity <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000153B61FCF08>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000153B61FCF08>>: AssertionError: Bad argument number for Name: 3, expecting 4  
WARNING:tensorflow:Entity <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x000001539A699948>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x000001539A699948>>: AssertionError: Bad argument number for Name: 3, expecting 4  
WARNING: Entity <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x000001539A699948>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x000001539A699948>>: AssertionError: Bad argument number for Name: 3, expecting 4  
WARNING:tensorflow:Entity <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150AED4A948>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150AED4A948>>: AssertionError: Bad argument number for Name: 3, expecting 4  
WARNING: Entity <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150AED4A948>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150AED4A948>>: AssertionError: Bad argument number for Name: 3, expecting 4  
WARNING:tensorflow:Entity <bound method Pooling2D.call of <tensorflow.python.layers.pooling.MaxPooling2D object at 0x00000150AE918B88>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Pooling2D.call of <tensorflow.python.layers.pooling.MaxPooling2D object at 0x00000150AE918B88>>: AssertionError: Bad argument number for Name: 3, expecting 4  
WARNING: Entity <bound method Pooling2D.call of <tensorflow.python.layers.pooling.MaxPooling2D object at 0x00000150AE918B88>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Pooling2D.call of <tensorflow.python.layers.pooling.MaxPooling2D object at 0x00000150AE918B88>>: AssertionError: Bad argument number for Name: 3, expecting 4
```

```
WARNING:tensorflow:Entity <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150AEE6BA48>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150AEE6BA48>>: AssertionError: Bad argument number for Name: 3, expecting 4
WARNING: Entity <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150AEE6BA48>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Conv.call of <tensorflow.python.layers.convolutional.Conv2D object at 0x00000150AEE6BA48>>: AssertionError: Bad argument number for Name: 3, expecting 4
WARNING:tensorflow:Entity <bound method Pooling2D.call of <tensorflow.python.layers.pooling.MaxPooling2D object at 0x00000150AEAC0E48>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Pooling2D.call of <tensorflow.python.layers.pooling.MaxPooling2D object at 0x00000150AEAC0E48>>: AssertionError: Bad argument number for Name: 3, expecting 4
WARNING: Entity <bound method Pooling2D.call of <tensorflow.python.layers.pooling.MaxPooling2D object at 0x00000150AEAC0E48>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Pooling2D.call of <tensorflow.python.layers.pooling.MaxPooling2D object at 0x00000150AEAC0E48>>: AssertionError: Bad argument number for Name: 3, expecting 4
WARNING:tensorflow:Entity <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x00000150DA63AFC8>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x00000150DA63AFC8>>: AttributeError: module 'gast' has no attribute 'Num'
WARNING: Entity <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x00000150DA63AFC8>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Flatten.call of <tensorflow.python.layers.core.Flatten object at 0x00000150DA63AFC8>>: AttributeError: module 'gast' has no attribute 'Num'
WARNING:tensorflow:Entity <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000150DA63AFC8>> could not be transformed and will be executed as-is. Please report this to the Autograph team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH_VERTBOSITY=10`) and attach the full output. Cause: converting <bound method Dense.call of <tensorflow.python.layers.core.Dense object at 0x00000150DA63AFC8>>: AssertionError: Bad argument number for Name: 3, expecting 4
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INFO:tensorflow:Done calling model_fn.
INFO:tensorflow:Graph was finalized.
INFO:tensorflow:Restoring parameters from /tmp/modelchkpt\model.ckpt-20002
INFO:tensorflow:Running local_init_op.
INFO:tensorflow:Done running local_init_op.
```

```
In [20]: from sklearn.metrics import confusion_matrix , classification_report , accuracy_score
print('{} \n{} \n{}'.format(confusion_matrix(test_y , classes) ,
classification_report(test_y , classes) ,
accuracy_score(test_y , classes)))
```

```
[[3796 289]
 [ 256 5305]]
```

	precision	recall	f1-score	support
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0	0.94	0.93	0.93	4085
1	0.95	0.95	0.95	5561

accuracy			0.94	9646
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macro avg	0.94	0.94	0.94	9646
-----------	------	------	------	------

weighted avg	0.94	0.94	0.94	9646
--------------	------	------	------	------

0.943499896330085

```
In [21]: plt.figure(1 , figsize = (15 , 9))
n = 0
for i in range(49):
    n += 1
    r = np.random.randint( 0 , test_x.shape[0] , 1)
    plt.subplot(7 , 7 , n)
    plt.subplots_adjust(hspace = 0.5 , wspace = 0.5)
    plt.imshow(test_x[r[0]])
    plt.title('true {} : pred {}'.format(test_y[r[0]] , classes[r[0]]))
    plt.xticks([]) , plt.yticks([])

plt.show()
```

