In [2]:
```
pwd
```

Out[2]:
```
'C:\\Users\\Kate\\Documents\\GitHub\\dsc650\\dsc650\\assignments\\completed'
```

Michael Ersevim - DSC650 - Ex 6.3

In [5]:
```
from tensorflow.keras.applications.resnet50 import ResNet50
from tensorflow.keras.preprocessing import image
from tensorflow.keras.applications.resnet50 import preprocess_input, decode_predictions
import numpy as np

model = ResNet50(weights='imagenet')

img_path = 'plane.jpg'
img = image.load_img(img_path, target_size=(224, 224))
x = image.img_to_array(img)
x = np.expand_dims(x, axis=0)
x = preprocess_input(x)

preds = model.predict(x)
# decode the results into a list of tuples (class, description, probability)
# (one such list for each sample in the batch)
print('Predicted:', decode_predictions(preds, top=2)[0])

img_path = 'suv.jpg'
img = image.load_img(img_path, target_size=(224, 224))
x = image.img_to_array(img)
x = np.expand_dims(x, axis=0)
x = preprocess_input(x)

preds = model.predict(x)
# decode the results into a list of tuples (class, description, probability)
# (one such list for each sample in the batch)
print('Predicted:', decode_predictions(preds, top=2)[0])

img_path = 'bike.jpg'
img = image.load_img(img_path, target_size=(224, 224))
x = image.img_to_array(img)
x = np.expand_dims(x, axis=0)
x = preprocess_input(x)

preds = model.predict(x)
# decode the results into a list of tuples (class, description, probability)
# (one such list for each sample in the batch)
print('Predicted:', decode_predictions(preds, top=2)[0])

img_path = 'atv.jpg'
img = image.load_img(img_path, target_size=(224, 224))
x = image.img_to_array(img)
x = np.expand_dims(x, axis=0)
x = preprocess_input(x)

preds = model.predict(x)
# decode the results into a list of tuples (class, description, probability)
# (one such list for each sample in the batch)
print('Predicted:', decode_predictions(preds, top=2)[0])
```

```
img_path = 'cake.jpg'
img = image.load_img(img_path, target_size=(224, 224))
x = image.img_to_array(img)
x = np.expand_dims(x, axis=0)
x = preprocess_input(x)

preds = model.predict(x)
# decode the results into a list of tuples (class, description, probability)
# (one such list for each sample in the batch)
print('Predicted:', decode_predictions(preds, top=2)[0])
```

```
1/1 [==============================] - 2s 2s/step
Predicted: [('n04592741', 'wing', 0.71139246), ('n04552348', 'warplane', 0.18160455)]
1/1 [==============================] - 0s 183ms/step
Predicted: [('n03930630', 'pickup', 0.85233086), ('n04461696', 'tow_truck', 0.04432382
8)]
1/1 [==============================] - 0s 167ms/step
Predicted: [('n03792782', 'mountain_bike', 0.73315424), ('n03785016', 'moped', 0.1270026
7)]
1/1 [==============================] - 0s 166ms/step
Predicted: [('n03208938', 'disk_brake', 0.09678998), ('n02791124', 'barber_chair', 0.082
60242)]
1/1 [==============================] - 0s 165ms/step
Predicted: [('n07745940', 'strawberry', 0.57908654), ('n12768682', 'buckeye', 0.0746202
6)]
```

In [ ]: