In [ ]:
```
model = models.Sequential()

model.add(layers.Conv2D(32, (3, 3), padding='same', activation='relu',
                        input_shape=(224 ,224,  3)))
model.add(layers.BatchNormalization())

model.add(layers.Conv2D(32, (3, 3), activation='relu', padding='same'))
model.add(layers.BatchNormalization())
model.add(layers.MaxPooling2D((2, 2)))

model.add(layers.Conv2D(64, (3, 3), activation='relu', padding='same'))
model.add(layers.BatchNormalization())

model.add(layers.Conv2D(64, (3, 3), activation='relu', padding='same'))
model.add(layers.BatchNormalization())
model.add(layers.Conv2D(64, (3, 3), activation='relu', padding='same'))
model.add(layers.BatchNormalization())
model.add(layers.MaxPooling2D((2, 2)))

model.add(layers.Conv2D(128, (3, 3), activation='relu', padding='same'))
model.add(layers.BatchNormalization())
model.add(layers.Conv2D(128, (3, 3), activation='relu', padding='same'))
model.add(layers.BatchNormalization())
model.add(layers.MaxPooling2D((2, 2)))
model.add(layers.Flatten())
model.add(layers.Dense(128, activation='relu'))
model.add(layers.Dense(1, activation='linear'))

model.compile(loss='mean_squared_error',
              optimizer='Adam',
              metrics=['mse'])
history = model.fit(X_train,
                    y_train,
                    epochs=32,
                    batch_size=500,
                    validation_data=(X_val, y_val))
```

```
Epoch 1/32
10/10 [==============================] - 660s 66s/step - loss: 9656.5176 - ms
e: 9656.5176 - val_loss: 5076.3188 - val_mse: 5076.3188
Epoch 2/32
10/10 [==============================] - 652s 65s/step - loss: 3542.4961 - ms
e: 3542.4961 - val_loss: 5016.4951 - val_mse: 5016.4951
Epoch 3/32
10/10 [==============================] - 653s 65s/step - loss: 3017.6331 - ms
e: 3017.6331 - val_loss: 4938.5415 - val_mse: 4938.5415
Epoch 4/32
10/10 [==============================] - 655s 66s/step - loss: 2636.5623 - ms
e: 2636.5623 - val_loss: 4287.7764 - val_mse: 4287.7764
Epoch 5/32
10/10 [==============================] - 709s 71s/step - loss: 2246.5730 - ms
e: 2246.5730 - val_loss: 3879.7759 - val_mse: 3879.7759
Epoch 6/32
10/10 [==============================] - 650s 65s/step - loss: 2077.5029 - ms
e: 2077.5029 - val_loss: 3634.5376 - val_mse: 3634.5376
Epoch 7/32
10/10 [==============================] - 644s 64s/step - loss: 2002.2865 - ms
```

```
e: 2002.2865 - val_loss: 3511.2734 - val_mse: 3511.2734
Epoch 8/32
10/10 [==============================] - 645s 65s/step - loss: 1960.5397 - ms
e: 1960.5397 - val_loss: 2974.9592 - val_mse: 2974.9592
Epoch 9/32
10/10 [==============================] - 645s 64s/step - loss: 1855.9740 - ms
e: 1855.9738 - val_loss: 3303.4980 - val_mse: 3303.4980
Epoch 10/32
10/10 [==============================] - 644s 64s/step - loss: 1775.3872 - ms
e: 1775.3872 - val_loss: 3686.9868 - val_mse: 3686.9868
Epoch 11/32
10/10 [==============================] - 645s 64s/step - loss: 1714.9642 - ms
e: 1714.9642 - val_loss: 7864.9551 - val_mse: 7864.9551
Epoch 12/32
 6/10 [=================>............] - ETA: 3:57 - loss: 1585.9143 - mse: 1
585.9143
```

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```
results_train = model.evaluate(X_train, y_train)
```

In [ ]:
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model.save('path/to/location')
```

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```
df_scrub.to_csv('data/clean_dataframe.csv')
```

In [ ]:
```
# import glob
# import os


# path = r'C:\Users\12108\Desktop\ebay_knife_data\dsc-5-capstone-project\surplusS
# all_files = glob.glob(os.path.join(path, "*.csv"))     # advisable to use os.pa

# df_from_each_file = (pd.read_csv(f) for f in all_files)
# concatenated_df   = pd.concat(df_from_each_file, ignore_index=True)

# concatenated_df.head()

# concatenated_df.fillna(0, inplace=True)

# concatenated_df.info()

# concatenated_df.to_csv('surplusStore/workingDataFrame2.csv')
```

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```
df.isna().sum()
```

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THIS CALL TO THE WEBSITE RETURNED NO SOG