# Classify ImageNet classes with ResNet50

In [1]:

```python
from tensorflow.keras.applications.resnet50 import ResNet50
from tensorflow.keras.preprocessing import image
from tensorflow.keras.applications.resnet50 import preprocess_input, decode_pred
import numpy as np
```

In [2]:

```python
model = ResNet50(weights='imagenet')
```

```
2023-07-29 16:38:28.715797: I tensorflow/core/platform/cpu_feature_gua
rd.cc:145] This TensorFlow binary is optimized with Intel(R) MKL-DNN t
o use the following CPU instructions in performance critical operation
s:  SSE4.1 SSE4.2 AVX AVX2 FMA
To enable them in non-MKL-DNN operations, rebuild TensorFlow with the
appropriate compiler flags.
2023-07-29 16:38:28.720031: I tensorflow/core/common_runtime/process_u
til.cc:115] Creating new thread pool with default inter op setting: 4.
Tune using inter_op_parallelism_threads for best performance.

Downloading data from https://github.com/keras-team/keras-application
s/releases/download/resnet/resnet50_weights_tf_dim_ordering_tf_kernel
s.h5 (https://github.com/keras-team/keras-applications/releases/downlo
ad/resnet/resnet50_weights_tf_dim_ordering_tf_kernels.h5)
102973440/102967424 [==============================] - 4s 0us/step
```

In [3]:

```python
img_path = '/Users/myyntiimac/Desktop/squirl.jpeg'
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)
```

In [4]:

```python
preds = model.predict(x)
```

In [5]:

```python
print('Predicted:', decode_predictions(preds, top=3)[0])
```

```
Downloading data from https://storage.googleapis.com/download.tensorfl
ow.org/data/imagenet_class_index.json (https://storage.googleapis.com/
download.tensorflow.org/data/imagenet_class_index.json)
40960/35363 [================================] - 0s 1us/step
Predicted: [('n02356798', 'fox_squirrel', 0.999498), ('n01694178', 'Af
rican_chameleon', 5.383978e-05), ('n02361337', 'marmot', 4.0124545e-0
5)]
```

In [ ]:

```
Insight. so our image contain picture of fox_squirrel
```