

Dataset: <https://www.kaggle.com/competitions/dogs-vs-cats/data>

Importing the libraries

```
[1]: import os
import random

import matplotlib.pyplot as plt
import numpy as np
import pandas as pd

from keras.callbacks import EarlyStopping, ReduceLROnPlateau
from tensorflow.keras.layers import Conv2D, BatchNormalization, MaxPooling2D, Dropout, Flatten, Dense
from tensorflow.keras.models import Sequential
from tensorflow.keras.preprocessing.image import ImageDataGenerator
from keras.regularizers import l2

from sklearn.model_selection import train_test_split

%matplotlib inline
```