In [18]:
```
import tensorflow as tf
from tensorflow.keras.preprocessing.image import ImageDataGenerator
from tensorflow.keras.models import Sequential
from tensorflow.keras.layers import Conv2D, MaxPooling2D, Flatten, Dense

# Define paths
data = "C:/Users/gagan/Downloads/archive (1)/Animal Image Dataset-Cats, Dogs, and Foxes/dog"
data = "C:/Users/gagan/Downloads/archive (1)/Animal Image Dataset-Cats, Dogs, and Foxes/cat"
```

In [24]:
```
# Data augmentation and loading

train_datagen = ImageDataGenerator(rescale=1./255, rotation_range=20, width_shift_range=0.2, height_shift_range=0.2)
test_datagen = ImageDataGenerator(rescale=1./255)
```

In [26]:
```
train_generator = train_datagen.flow_from_directory(train_dir, target_size=(224, 224), batch_size=64, class_mode='cate
test_generator = test_datagen.flow_from_directory(test_dir, target_size=(224, 224), batch_size=64, class_mode='categor
```

```
Found 0 images belonging to 0 classes.
Found 0 images belonging to 0 classes.
```

In [29]:
```
# Model definition
model = Sequential([
    Conv2D(32, (3, 3), activation='relu', input_shape=(224, 224, 3)),
    MaxPooling2D((2, 2)),
    Conv2D(64, (3, 3), activation='relu'),
    MaxPooling2D((2, 2)),
    Flatten(),
    Dense(128, activation='relu'),
    Dense(len(train_generator.class_indices), activation='softmax')
])
```

In [32]:
```
# Compile model
model.compile(optimizer='adam', loss='categorical_crossentropy', metrics=['accuracy'])
print(train_generator.samples)
print(test_generator.samples)
```

```
0
0
```