Testing

Now, the model can be used to predict the animal from a never before seen photo. Here, it accurately predicts that the provided image is a bear even though it has not been trained on this exact bear image yet.

In [ ]:
```
from tensorflow.keras.models import load_model
from tensorflow.keras.preprocessing import image
import numpy as np
from tensorflow import keras
import cv2

# Load the trained model
model = load_model('animals.keras')

# Classes
class_indices = {'Bear': 0, 'Cat': 1, 'Cow': 2, 'Dog': 3, 'Eagle': 4, 'Goril
```

In [ ]:
```
# Function to preprocess and predict the class of a new image
def predict_image_class(img_path):
    img = image.load_img(img_path, target_size=(150, 150)).convert("L")
    img_array = image.img_to_array(img)
    img_array = np.expand_dims(img_array, axis=0)
    img_array /= 255.



    # Predict the class
    predictions = model.predict(img_array)
    predicted_class_index = np.argmax(predictions, axis=1)[0]

    predicted_class_name = [name for name, index in class_indices.items() if

    print("Predicted class:", predicted_class_name)

# Update this path to your test image
img_path = '/Users/shahdivyank/Desktop/animal-classifier/api/bear_test.jpeg'

predict_image_class(img_path)
```

```
1/1 ━━━━━━━━━━━━━━━━━━━━ 0s 45ms/step
Predicted class: Bear
```

In [ ]:
```

```