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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

1/1 ————— 0s 45ms/step

Predicted class: Bear

In [ ]: