```python
# ✅ Get class labels from training generator
class_labels = list(train_generator.class_indices.keys())
print("Class labels:", class_labels)

# ========================
# Predict on a single image
# ========================
img_path = "/kaggle/input/mushroom/Dataset/train/Boletus/0001_yB5GiXfgyRU.jpg"  # 👈 replace with your test image

# Load and preprocess image
img = image.load_img(img_path, target_size=(224, 224))   # must match model input size
img_array = image.img_to_array(img) / 255.0              # rescale like in training
img_array = np.expand_dims(img_array, axis=0)            # add batch dimension

# Predict
predictions = model.predict(img_array)
predicted_class = np.argmax(predictions, axis=1)[0]
confidence = np.max(predictions)

print(f"✅ Predicted Class: {class_labels[predicted_class]} (Confidence: {confidence*100:.2f}%)")
```

```
Class labels: ['Boletus', 'Lactarius', 'Russula']
1/1 ━━━━━━━━━━━━━━━━━━━━ 4s 4s/step
✅ Predicted Class: Russula (Confidence: 99.84%)
```

+ Code + Markdown

```python
model.save("mushroom_model.h5")
```