artist class eval effnet

March 25, 2025

0.1 Defining the convolutional-recurrent architecture consisting of Efficient-NetB0 as the convolutional network

```
[]: import torch.nn as nn
     import torch.nn.functional as F
     import torchvision.models as models
     import torch
     class EffNetLSTM(nn.Module):
         def __init__(self, num_classes):
             super().__init__()
             effnet = models.efficientnet_b0(weights=models.EfficientNet_B0_Weights.
      →IMAGENET1K_V1)
             self.cnn = effnet.features
             self.channel reducer = nn.Sequential(
                 nn.Conv2d(1280, 512, kernel_size=1),
                 nn.BatchNorm2d(512),
                 nn.ReLU()
             )
             self.lstm = nn.LSTM(
                 input_size=512,
                 hidden_size=256,
                 num_layers=2,
                 bidirectional=True,
                 batch_first=True
             )
             self.classifier = nn.Sequential(
                 nn.Linear(512, 256),
                 nn.ReLU(),
                 nn.Dropout(0.5),
                 nn.Linear(256, num_classes)
             )
         def forward(self, x):
```

```
features = self.cnn(x)

x = self.channel_reducer(features)
bs, c, h, w = x.size()
x = x.permute(0, 2, 3, 1).reshape(bs, h*w, c)

lstm_out, (h_n, c_n) = self.lstm(x)
last_hidden = torch.cat((h_n[-2], h_n[-1]), dim=1)

return self.classifier(last_hidden)
```

0.2 Dataset loading

```
[4]: val_images = df_val['image_path'].values
val_labels = df_val['artist_id'].values
```

0.3 Dataset class creation and dataloader

```
[]: def get_image(image_path,image_size=224):
         try:
             img = cv2.imread('./wikiart/' + image_path)
             if img is None:
                 raise ValueError(f"Image not loaded: ./wikiart/{image_path}")
             img = cv2.cvtColor(img, cv2.COLOR_BGR2RGB)
             h, w, = img.shape
             scale = 256 / min(h, w)
             new_w = int(w * scale)
             new_h = int(h * scale)
             img_resized = cv2.resize(img, (new_w, new_h))
             start_x = (new_w - image_size) // 2
             start_y = (new_h - image_size) // 2
             img_cropped = img_resized[start_y:start_y+image_size, start_x:

start_x+image_size]

             img_cropped = img_cropped.astype(np.float32) / 255.0
             img_tensor = torch.from_numpy(img_cropped).permute(2, 0, 1)
             mean = torch.tensor([0.485, 0.456, 0.406]).view(3, 1, 1)
```

```
std = torch.tensor([0.229, 0.224, 0.225]).view(3, 1, 1)
        img_tensor = (img_tensor - mean) / std
       return img_tensor
    except Exception as e:
       print(f"Error processing {image_path}: {e}")
        return torch.zeros(3, image_size, image_size)
class WikiArtDataset(torch.utils.data.Dataset):
   def init (self, images, labels):
       self.images = images
        self.labels = labels
   def __len__(self):
       return len(self.images)
   def __getitem__(self, idx):
        # image_vectors = []
        # for image in self.images:
             image_emb = get_image(image)
              image_vectors.append(image_emb)
        # image = torch.stack(image_vectors)
        image = self.images[idx]
        # label should be a one-hot encoded vector
       label = torch.zeros(num classes)
       label[self.labels[idx]] = 1
       return image, label
# train_dataset = WikiArtDataset(train_images, train_labels)
# train_loader = torch.utils.data.DataLoader(train_dataset, batch_size=64,_
 ⇔shuffle=True)
val_dataset = WikiArtDataset(val_images, val_labels)
val_loader = torch.utils.data.DataLoader(val_dataset, batch_size=128,_
 ⇒shuffle=False)
```

0.4 Model declaration and loading the saved weights

```
[]: model = EffNetLSTM(num_classes=num_classes)
    model.load_state_dict(torch.load('effnet_rcnn_epoch_11.pth'))
    model = model.cuda()

[]: def top_1_accuracy(outputs, labels):
    _, predicted = torch.max(outputs, 1)
    _, actual = torch.max(labels, 1)
    correct = (predicted == actual).sum().item()
    return correct / labels.shape[0]
```

```
def top_5_accuracy(outputs, labels):
    _, predicted = torch.topk(outputs, 5, dim=1)
    _, actual = torch.max(labels, 1)
    correct = 0
    for i in range(labels.shape[0]):
        if actual[i] in predicted[i]:
            correct += 1
    return correct / labels.shape[0]
model.eval()
top1_acc = 0
top5_acc = 0
num_batches = 0
for image_paths, labels in val_loader:
    with torch.no_grad():
        images = torch.stack([get_image(image_path) for image_path in_
 →image_paths])
        images = images.cuda()
        outputs = model(images)
        labels = labels.cuda()
        top1_acc += top_1_accuracy(outputs, labels)
        top5_acc += top_5_accuracy(outputs, labels)
        num_batches += 1
top1_acc /= num_batches
top5_acc /= num_batches
print(f"Top-1 accuracy: {top1_acc:.2f}")
print(f"Top-5 accuracy: {top5_acc:.2f}")
```

Top-1 accuracy: 0.75 Top-5 accuracy: 0.94

0.5 Outlier detection based on embeddings and confidence of prediction

```
[]: import torch.nn as nn
import torch.nn.functional as F
import torch
import numpy as np
from sklearn.metrics.pairwise import cosine_similarity
import pandas as pd
import cv2

softmax = nn.Softmax(dim=1)

def detect_outliers(outputs, labels, image_paths, threshold=0.5):
    probs = torch.nn.functional.softmax(outputs, dim=1)
```

```
max_probs, predicted_classes = torch.max(probs, dim=1)
    _, actual_classes = torch.max(labels, dim=1)
    outliers = []
    for i in range(len(image_paths)):
        prob = max_probs[i].item()
        pred_class = predicted_classes[i].item()
        actual_class = actual_classes[i].item()
        if prob < threshold:</pre>
            outliers.append((image_paths[i], pred_class, actual_class, prob))
    return outliers
def get_embeddings(model, images):
    with torch.no_grad():
        features = model.cnn(images)
        x = model.channel_reducer(features)
        bs, c, h, w = x.size()
        x = x.permute(0, 2, 3, 1).reshape(bs, h*w, c)
        lstm out, (h n, c n) = model.lstm(x)
        lstm_out, _ = model.lstm(x)
        return lstm_out.mean(dim=1).cpu().numpy()
num_classes = 23
model = EffNetLSTM(num_classes=num_classes)
model.load_state_dict(torch.load('effnet_rcnn_epoch_11.pth'))
model = model.cuda()
model.eval()
outlier_samples = []
all_embeddings = []
all_labels = []
all_image_paths = []
predictions = []
for image_paths, labels in val_loader:
    with torch.no_grad():
        images = torch.stack([get_image(image_path) for image_path in_
 →image_paths])
        images = images.cuda()
        outputs = model(images)
        labels = labels.cuda()
```

```
# Detect outliers
        outliers = detect_outliers(outputs, labels, image_paths)
        outlier_samples.extend(outliers)
        t = torch.nn.functional.softmax(outputs, dim=1)
        max_probs, predicted_classes = torch.max(t, dim=1)
        predictions.extend(predicted_classes.cpu().numpy())
        # Collect embeddings for clustering
        embeddings = get embeddings(model, images)
        all_embeddings.append(embeddings)
        all labels.extend(labels.cpu().numpy())
        all_image_paths.extend(image_paths)
all_embeddings = np.vstack(all_embeddings)
similarity_matrix = cosine_similarity(all_embeddings)
outlier_indices = np.argsort(np.mean(similarity_matrix, axis=1))[:10]
print("Low-confidence outliers:")
outlier_accuracy = 0
for path, pred, actual, conf in outlier_samples:
    outlier_accuracy += (pred != actual)
    print(f"Image: {path}, Predicted: {pred}, Actual: {actual}, Confidence:
 outlier_accuracy /= len(outlier_samples)
print(f"Outlier detection accuracy by confidence: {outlier_accuracy:.2f}")
print("Embedding-based outliers:")
outlier_accuracy = 0
for idx in outlier_indices:
    outlier_accuracy += (predictions[idx] != all_labels[idx].argmax())
    print(f"Image: {all_image_paths[idx]}, Predicted: {predictions[idx]},__
 →Actual: {all_labels[idx].argmax()}")
outlier_accuracy /= len(outlier_indices)
print(f"Outlier detection accuracy by embeddings: {outlier_accuracy:.2f}")
Low-confidence outliers:
Image: Impressionism/claude-monet_camille-sitting-on-the-beach-at-
trouville-1871.jpg, Predicted: 14, Actual: 4, Confidence: 0.35
Image: Impressionism/claude-monet_three-pots-of-tulips.jpg, Predicted: 17,
Actual: 4, Confidence: 0.18
Image: Impressionism/claude-monet storm-on-the-cote-de-belle-ile.jpg, Predicted:
4, Actual: 4, Confidence: 0.45
Image: Impressionism/claude-monet_the-frost-1.jpg, Predicted: 22, Actual: 4,
Confidence: 0.45
```

```
Image: Impressionism/claude-monet_coal-dockers.jpg, Predicted: 2, Actual: 4,
Confidence: 0.40
Image: Impressionism/claude-monet not_detected_212144.jpg, Predicted: 1, Actual:
4, Confidence: 0.25
Image: Impressionism/claude-monet two-anglers.jpg, Predicted: 4, Actual: 4,
Confidence: 0.39
Image: Impressionism/claude-monet the-siene-at-argentuil.jpg, Predicted: 6,
Actual: 4, Confidence: 0.36
Image: Impressionism/claude-monet_camille-with-green-parasol.jpg, Predicted: 4,
Actual: 4, Confidence: 0.47
Image: Impressionism/claude-monet_the-luncheon-1.jpg, Predicted: 22, Actual: 4,
Confidence: 0.39
Image: Impressionism/claude-monet_view-of-argenteuil-in-the-snow.jpg, Predicted:
2, Actual: 4, Confidence: 0.49
Image: Impressionism/claude-monet_the-promenade-study.jpg, Predicted: 2, Actual:
4, Confidence: 0.42
Image: Impressionism/claude-monet_the-banks-of-the-river-epte-at-giverny.jpg,
Predicted: 4, Actual: 4, Confidence: 0.41
Image: Impressionism/claude-monet_saint-lazare-station-exterior-view-2.jpg,
Predicted: 4, Actual: 4, Confidence: 0.29
Image: Impressionism/claude-monet_water-lilies-1917-2.jpg, Predicted: 15,
Actual: 4, Confidence: 0.42
Image: Impressionism/claude-monet_wharf-of-louvre-paris-1867.jpg, Predicted: 2,
Actual: 4, Confidence: 0.43
Image: Impressionism/claude-monet_vase-of-tulips.jpg, Predicted: 16, Actual: 4,
Confidence: 0.44
Image: Impressionism/claude-monet_the-garden-at-giverny-1924.jpg, Predicted: 4,
Actual: 4, Confidence: 0.30
Image: Impressionism/claude-monet_self-portrait-1917.jpg, Predicted: 8, Actual:
4, Confidence: 0.48
Image: Impressionism/claude-monet_the-magpie-1869.jpg, Predicted: 4, Actual: 4,
Confidence: 0.40
Image: Impressionism/claude-monet_the-river.jpg, Predicted: 4, Actual: 4,
Confidence: 0.49
Image: Impressionism/claude-monet_self-portrait-in-his-atelier.jpg, Predicted:
8, Actual: 4, Confidence: 0.38
Image: Impressionism/claude-monet_not_detected_212138.jpg, Predicted: 18,
Actual: 4, Confidence: 0.31
Image: Impressionism/claude-monet_rouen-cathedral-at-sunset.jpg, Predicted: 17,
Actual: 4, Confidence: 0.24
Image: Impressionism/claude-monet_isle-of-flowers-on-siene-near-vetheuil.jpg,
Predicted: 22, Actual: 4, Confidence: 0.46
Image: Impressionism/claude-monet_the-manneport-etretat-amont-cliff-rough-
weather-1886.jpg, Predicted: 3, Actual: 4, Confidence: 0.43
Image: Impressionism/claude-monet_houses-of-parliament-sunset.jpg, Predicted: 2,
Actual: 4, Confidence: 0.39
Image: Realism/claude-monet_trophies-of-the-hunt.jpg, Predicted: 11, Actual: 4,
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Image: Impressionism/claude-monet_sailboats-at-sea-pourville.jpg, Predicted: 4,
Actual: 4, Confidence: 0.46
Image: Impressionism/claude-monet_portrait-of-poly-fisherman-at-
kervillaouen.jpg, Predicted: 8, Actual: 4, Confidence: 0.36
Image: Impressionism/claude-monet_windmills-in-holland.jpg, Predicted: 2,
Actual: 4, Confidence: 0.28
Image: Impressionism/claude-monet_springtime-landscape.jpg, Predicted: 2,
Actual: 4, Confidence: 0.41
Image: Impressionism/claude-monet_poplars-on-the-banks-of-the-epte.jpg,
Predicted: 10, Actual: 4, Confidence: 0.47
Image: Impressionism/claude-monet_lunch-on-the-grass.jpg, Predicted: 4, Actual:
4, Confidence: 0.31
Image: Impressionism/claude-monet_lunch-on-the-grass-study.jpg, Predicted: 4,
Actual: 4, Confidence: 0.26
Image: Impressionism/claude-monet_red-and-pink-poppies.jpg, Predicted: 4,
Actual: 4, Confidence: 0.44
Image: Impressionism/claude-monet_lunch-on-the-grass-1.jpg, Predicted: 21,
Actual: 4, Confidence: 0.33
Image: Impressionism/claude-monet_windmills-at-haaldersbroek-zaandam.jpg,
Predicted: 2, Actual: 4, Confidence: 0.40
Image: Impressionism/claude-monet_ice-floes-on-the-seine-at-bougival-1868.jpg,
Predicted: 9, Actual: 4, Confidence: 0.37
Image: Impressionism/claude-monet_willows-in-springtime.jpg, Predicted: 2,
Actual: 4, Confidence: 0.44
Image: Impressionism/claude-monet_zaandam-the-dike-evening.jpg, Predicted: 2,
Actual: 4, Confidence: 0.46
Image: Impressionism/claude-monet red-mullets.jpg, Predicted: 16, Actual: 4,
Confidence: 0.21
Image: Impressionism/childe-hassam_dewey-s-arch.jpg, Predicted: 3, Actual: 3,
Confidence: 0.47
Image: Impressionism/childe-hassam_flower-girl-by-the-seine-paris.jpg,
Predicted: 2, Actual: 3, Confidence: 0.40
Image: Impressionism/childe-hassam_spring-landscape-with-a-farmer-and-white-
horse.jpg, Predicted: 4, Actual: 3, Confidence: 0.44
Image: Impressionism/childe-hassam_isle-of-shoals-2.jpg, Predicted: 17, Actual:
3, Confidence: 0.31
Image: Impressionism/childe-hassam_poppies-isles-of-shoals-02.jpg, Predicted: 3,
Actual: 3, Confidence: 0.33
Image: Impressionism/childe-hassam_the-snowy-winter-of-1918-new-york.jpg,
Predicted: 12, Actual: 3, Confidence: 0.35
Image: Impressionism/childe-hassam_peonies.jpg, Predicted: 2, Actual: 3,
Confidence: 0.41
Image: Impressionism/childe-hassam_a-city-fairyland.jpg, Predicted: 21, Actual:
3, Confidence: 0.24
Image: Impressionism/childe-hassam_the-cove.jpg, Predicted: 14, Actual: 3,
Confidence: 0.44
Image: Impressionism/childe-hassam_evening-champs-elysees-aka-pres-du-
louvre.jpg, Predicted: 3, Actual: 3, Confidence: 0.48
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Image: Impressionism/childe-hassam_summer-evening-paris.jpg, Predicted: 3,
Actual: 3, Confidence: 0.26
Image: Impressionism/childe-hassam shoveling-snow-new-england.jpg, Predicted: 3,
Actual: 3, Confidence: 0.35
Image: Impressionism/childe-hassam_the-white-dory.jpg, Predicted: 22, Actual: 3,
Confidence: 0.47
Image: Impressionism/childe-hassam untitled-study-for-bathers.jpg, Predicted: 4,
Actual: 3, Confidence: 0.31
Image: Impressionism/childe-hassam_portrait-of-a-lady-in-blue-dress.jpg,
Predicted: 22, Actual: 3, Confidence: 0.44
Image: Impressionism/childe-hassam_the-barnyard.jpg, Predicted: 10, Actual: 3,
Confidence: 0.33
Image: Impressionism/childe-hassam_the-quai-lannion.jpg, Predicted: 18, Actual:
3, Confidence: 0.39
Image: Impressionism/childe-hassam_bridge-at-old-lyme-02.jpg, Predicted: 6,
Actual: 3, Confidence: 0.45
Image: Impressionism/childe-hassam_the-gorge-appledore.jpg, Predicted: 13,
Actual: 3, Confidence: 0.50
Image: Impressionism/childe-hassam_the-hourse-of-actaeon-montauk.jpg, Predicted:
3, Actual: 3, Confidence: 0.36
Image: Impressionism/childe-hassam_summer-sunlight.jpg, Predicted: 3, Actual: 3,
Confidence: 0.50
Image: Impressionism/childe-hassam_fifth-avenue-aka-sunday-on-fifth-
avenue-1891.jpg, Predicted: 2, Actual: 3, Confidence: 0.25
Image: Impressionism/childe-hassam_isles-of-shoals.jpg, Predicted: 10, Actual:
3, Confidence: 0.44
Image: Impressionism/childe-hassam_the-church-at-gloucester.jpg, Predicted: 3,
Actual: 3, Confidence: 0.49
Image: Impressionism/childe-hassam_geraniums.jpg, Predicted: 3, Actual: 3,
Confidence: 0.44
Image: Impressionism/childe-hassam_autumn-hilltop-new-england-1906.jpg,
Predicted: 3, Actual: 3, Confidence: 0.46
Image: Impressionism/childe-hassam_chatou-near-bougival.jpg, Predicted: 8,
Actual: 3, Confidence: 0.26
Image: Impressionism/childe-hassam july-fourteenth-rue-daunou.jpg, Predicted: 3,
Actual: 3, Confidence: 0.49
Image: Impressionism/childe-hassam_lyman-s-ledge-appledore.jpg, Predicted: 3,
Actual: 3, Confidence: 0.46
Image: Impressionism/childe-hassam_at-the-grand-prix.jpg, Predicted: 3, Actual:
3, Confidence: 0.41
Image: Impressionism/childe-hassam_nurses-in-the-park.jpg, Predicted: 2, Actual:
3, Confidence: 0.46
Image: Impressionism/childe-hassam_laurel-on-the-ledges.jpg, Predicted: 4,
Actual: 3, Confidence: 0.45
Image: Impressionism/childe-hassam_oregon-landscape.jpg, Predicted: 4, Actual:
3, Confidence: 0.42
Image: Impressionism/eugene-boudin_the-beach-at-deauville-1863.jpg, Predicted:
6, Actual: 6, Confidence: 0.43
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Image: Impressionism/eugene-boudin_princess-pauline-metternich-on-the-beach.jpg,
Predicted: 11, Actual: 6, Confidence: 0.42
Image: Realism/eugene-boudin_spray-of-flowers-hollyhocks-1858.jpg, Predicted:
11, Actual: 6, Confidence: 0.23
Image: Impressionism/eugene-boudin_the-beach-1894.jpg, Predicted: 6, Actual: 6,
Confidence: 0.41
Image: Impressionism/eugene-boudin landscape-with-sunset.jpg, Predicted: 4,
Actual: 6, Confidence: 0.39
Image: Realism/eugene-boudin_the-saint-simeon-farm-1860.jpg, Predicted: 6,
Actual: 6, Confidence: 0.33
Image: Realism/eugene-boudin near-honfleur.jpg, Predicted: 2, Actual: 6,
Confidence: 0.45
Image: Impressionism/eugene-boudin_horses-for-hire-in-a-yard.jpg, Predicted: 6,
Actual: 6, Confidence: 0.39
Image: Realism/eugene-boudin_fishermen-by-the-water.jpg, Predicted: 18, Actual:
6, Confidence: 0.22
Image: Romanticism/ivan-aivazovsky_the-tower-of-genoa-1845.jpg, Predicted: 9,
Actual: 9, Confidence: 0.29
Image: Romanticism/ivan-aivazovsky_the-betrayal-of-judas-1834.jpg, Predicted:
20, Actual: 9, Confidence: 0.34
Image: Romanticism/ivan-aivazovsky_surf-1888.jpg, Predicted: 4, Actual: 9,
Confidence: 0.43
Image: Romanticism/ivan-aivazovsky_the-daryal-canyon-1855.jpg, Predicted: 10,
Actual: 9, Confidence: 0.22
Image: Romanticism/ivan-aivazovsky_view-of-tiflis-1868.jpg, Predicted: 14,
Actual: 9, Confidence: 0.46
Image: Post_Impressionism/vincent-van-gogh_vase-with-daisies-and-
anemones-1887.jpg, Predicted: 4, Actual: 22, Confidence: 0.46
Image: Post_Impressionism/vincent-van-gogh_still-life-glass-with-wild-
flowers-1890.jpg, Predicted: 22, Actual: 22, Confidence: 0.25
Image: Realism/vincent-van-gogh_head-of-a-peasant-woman-with-dark-
cap-1885-5(1).jpg, Predicted: 15, Actual: 22, Confidence: 0.45
Image: Post_Impressionism/vincent-van-gogh_interior-of-a-restaurant-1887-1.jpg,
Predicted: 3, Actual: 22, Confidence: 0.32
Image: Realism/vincent-van-gogh_seated-nude-after-bargues-1890.jpg, Predicted:
15, Actual: 22, Confidence: 0.31
Image: Post_Impressionism/vincent-van-gogh_three-studies-1890.jpg, Predicted: 1,
Actual: 22, Confidence: 0.37
Image: Post_Impressionism/vincent-van-gogh_still-life-with-bloaters-and-
garlic-1887.jpg, Predicted: 5, Actual: 22, Confidence: 0.27
Image: Post_Impressionism/vincent-van-gogh_portrait-of-a-woman-with-a-red-
ribbon-1885.jpg, Predicted: 5, Actual: 22, Confidence: 0.40
Image: Realism/vincent-van-gogh_sculpture-and-still-life-with-cabbage-and-
clogs-1881.jpg, Predicted: 1, Actual: 22, Confidence: 0.41
Image: Post_Impressionism/vincent-van-gogh_the-seine-with-the-pont-de-la-grande-
jette-1887.jpg, Predicted: 2, Actual: 22, Confidence: 0.48
Image: Post_Impressionism/vincent-van-gogh_a-pair-of-lovers-arles-1888(1).jpg,
Predicted: 21, Actual: 22, Confidence: 0.28
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Image: Realism/vincent-van-gogh_portrait-of-an-old-man-with-beard-1885.jpg,
Predicted: 16, Actual: 22, Confidence: 0.43
Image: Realism/vincent-van-gogh_peasant-woman-head-1884.jpg, Predicted: 22,
Actual: 22, Confidence: 0.39
Image: Realism/vincent-van-gogh_baskets-of-potatoes-1885(1).jpg, Predicted: 16,
Actual: 22, Confidence: 0.45
Image: Post_Impressionism/vincent-van-gogh_still-life-with-three-books-1887.jpg,
Predicted: 19, Actual: 22, Confidence: 0.34
Image: Post_Impressionism/vincent-van-gogh_the-garden-with-sunflower-1887.jpg,
Predicted: 18, Actual: 22, Confidence: 0.44
Image: Realism/vincent-van-gogh head-of-a-woman-16.jpg, Predicted: 15, Actual:
22, Confidence: 0.42
Image: Post_Impressionism/vincent-van-gogh_two-thistles-1888.jpg, Predicted: 22,
Actual: 22, Confidence: 0.44
Image: Realism/vincent-van-gogh_the-green-parrot-1886.jpg, Predicted: 5, Actual:
22, Confidence: 0.42
Image: Post_Impressionism/vincent-van-gogh_cypresses-with-two-women-1889(1).jpg,
Predicted: 12, Actual: 22, Confidence: 0.48
Image: Post_Impressionism/vincent-van-gogh_clarinetist-and-piccolo-
player-1887(1).jpg, Predicted: 15, Actual: 22, Confidence: 0.49
Image: Realism/vincent-van-gogh_view-of-het-steen-1885.jpg, Predicted: 2,
Actual: 22, Confidence: 0.42
Image: Realism/vincent-van-gogh_still-life-with-meadow-flowers-and-
roses-1886.jpg, Predicted: 13, Actual: 22, Confidence: 0.41
Image: Post_Impressionism/vincent-van-gogh_olive-trees-1888.jpg, Predicted: 19,
Actual: 22, Confidence: 0.42
Image: Realism/vincent-van-gogh_man-breaking-up-the-soil-1883.jpg, Predicted:
22, Actual: 22, Confidence: 0.39
Image: Realism/vincent-van-gogh_two-sketches-of-a-man-leaning-on-his-
spade-1867.jpg, Predicted: 8, Actual: 22, Confidence: 0.38
Image: Realism/vincent-van-gogh_scheveningen-women-and-other-people-under-
umbrellas-1882.jpg, Predicted: 15, Actual: 22, Confidence: 0.41
Image: Realism/vincent-van-gogh_kneeling-man-planting-1881.jpg, Predicted: 22,
Actual: 22, Confidence: 0.41
Image: Realism/vincent-van-gogh the-parsonage-garden-at-nuenen-with-pond-and-
figures-1885.jpg, Predicted: 22, Actual: 22, Confidence: 0.44
Image: Post_Impressionism/vincent-van-gogh_cypresses-and-two-women-1890(1).jpg,
Predicted: 22, Actual: 22, Confidence: 0.49
Image: Post_Impressionism/vincent-van-gogh_portrait-of-madame-ginoux-l-
arlesienne-1888-1.jpg, Predicted: 22, Actual: 22, Confidence: 0.38
Image: Post_Impressionism/vincent-van-gogh_vase-with-red-and-white-carnations-
on-a-yellow-background-1886.jpg, Predicted: 16, Actual: 22, Confidence: 0.39
Image: Realism/vincent-van-gogh_still-life-with-bible.jpg, Predicted: 22,
Actual: 22, Confidence: 0.32
Image: Post_Impressionism/vincent-van-gogh_cafe-terrace-on-the-place-du-
forum-1888(1).jpg, Predicted: 1, Actual: 22, Confidence: 0.46
Image: Realism/vincent-van-gogh_the-landscape-in-drenthe-1883.jpg, Predicted: 9,
Actual: 22, Confidence: 0.40
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Image: Post_Impressionism/vincent-van-gogh_fishing-boats-on-the-beach-at-les-
saintes-maries-de-la-mer-1888-1(1).jpg, Predicted: 13, Actual: 22, Confidence:
0.37
Image: Realism/vincent-van-gogh_road-with-pollard-willows-1881-1.jpg, Predicted:
10, Actual: 22, Confidence: 0.48
Image: Impressionism/camille-pissarro_entrance-to-the-village-of-voisins-
yvelines-1872.jpg, Predicted: 2, Actual: 2, Confidence: 0.40
Image: Impressionism/camille-pissarro_london-st-paul-s-cathedral-1890.jpg,
Predicted: 18, Actual: 2, Confidence: 0.33
Image: Impressionism/camille-pissarro_road-from-osny-to-pontoise-hoar-
frost-1873.jpg, Predicted: 2, Actual: 2, Confidence: 0.49
Image: Impressionism/camille-pissarro_study-of-apple-trees-at-eragny.jpg,
Predicted: 2, Actual: 2, Confidence: 0.44
Image: Impressionism/camille-pissarro peasant-woman-at-the-well.jpg, Predicted:
8, Actual: 2, Confidence: 0.28
Image: Impressionism/camille-pissarro_landscape-at-eragny.jpg, Predicted: 4,
Actual: 2, Confidence: 0.46
Image: Impressionism/camille-pissarro_portrait-of-pere-papeille-pontoise.jpg,
Predicted: 8, Actual: 2, Confidence: 0.27
Image: Impressionism/camille-pissarro_portrait-of-felix-pissarro-1881.jpg,
Predicted: 17, Actual: 2, Confidence: 0.41
Image: Impressionism/camille-pissarro_a-part-of-jallais-pontoise-1875.jpg,
Predicted: 2, Actual: 2, Confidence: 0.36
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Confidence: 0.37
Image: Impressionism/camille-pissarro the-farm-osny.jpg, Predicted: 11, Actual:
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Image: Realism/camille-pissarro_in-the-woods.jpg, Predicted: 10, Actual: 2,
Confidence: 0.44
Image: Impressionism/camille-pissarro_le-boulevard-de-clichy-1880.jpg,
Predicted: 3, Actual: 2, Confidence: 0.35
Image: Impressionism/camille-pissarro_haystacks-1889.jpg, Predicted: 6, Actual:
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Image: Realism/camille-pissarro_donkey-ride-at-la-roche-guyon.jpg, Predicted: 2,
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Image: Impressionism/camille-pissarro_a-cottage-in-the-snow-1879.jpg, Predicted:
3, Actual: 2, Confidence: 0.40
Image: Impressionism/camille-pissarro_half-length-portrait-of-lucien-
pissarro.jpg, Predicted: 1, Actual: 2, Confidence: 0.28
Image: Impressionism/camille-pissarro_the-pont-neuf-shipwreck-of-the-bonne-
mere-1901.jpg, Predicted: 2, Actual: 2, Confidence: 0.47
Image: Impressionism/camille-pissarro_paul-study-1898.jpg, Predicted: 2, Actual:
2, Confidence: 0.24
Image: Impressionism/camille-pissarro bathers-3-1894.jpg, Predicted: 4, Actual:
2, Confidence: 0.42
Image: Impressionism/camille-pissarro_the-moret-bridge-1888.jpg, Predicted: 10,
Actual: 2, Confidence: 0.49
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Image: Impressionism/camille-pissarro_portrait-of-jeanne-rachel-

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minette-1872.jpg, Predicted: 5, Actual: 2, Confidence: 0.24
Image: Impressionism/camille-pissarro_resting-in-the-woods-pontoise-1878.jpg,
Predicted: 2, Actual: 2, Confidence: 0.50
Image: Impressionism/camille-pissarro_rouen-fog-effect-1898.jpg, Predicted: 2,
Actual: 2, Confidence: 0.46
Image: Impressionism/camille-pissarro_landscape-3.jpg, Predicted: 18, Actual: 2,
Confidence: 0.30
Image: Realism/camille-pissarro_the-railway-bridge-pontoise.jpg, Predicted: 1,
Actual: 2, Confidence: 0.45
Image: Impressionism/camille-pissarro_a-young-maid.jpg, Predicted: 2, Actual: 2,
Confidence: 0.36
Image: Impressionism/camille-pissarro_portrait-of-the-artist-s-mother.jpg,
Predicted: 5, Actual: 2, Confidence: 0.26
Image: Impressionism/camille-pissarro_la-saint-martin-a-pontoise.jpg, Predicted:
4, Actual: 2, Confidence: 0.40
Image: Impressionism/camille-pissarro_ploughland-1874.jpg, Predicted: 2, Actual:
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Image: Impressionism/camille-pissarro_woman-and-child-doing-needlework-1877.jpg,
Predicted: 3, Actual: 2, Confidence: 0.35
Image: Impressionism/camille-pissarro_the-church-and-farm-of-eragny-1895.jpg,
Predicted: 2, Actual: 2, Confidence: 0.45
Image: Impressionism/camille-pissarro_lower-norwood-1871.jpg, Predicted: 4,
Actual: 2, Confidence: 0.25
Image: Romanticism/gustave-dore_the-army-of-priest-volkmar-and-count-emocio-
attack-merseburg-1877.jpg, Predicted: 7, Actual: 7, Confidence: 0.46
Image: Romanticism/gustave-dore_jesus.jpg, Predicted: 0, Actual: 7, Confidence:
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Image: Romanticism/gustave-dore_frontispiece-of-all-five-books-of-gargantua-and-
pantagruel.jpg, Predicted: 14, Actual: 7, Confidence: 0.23
Image: Romanticism/gustave-dore_the-little-thumb.jpg, Predicted: 7, Actual: 7,
Confidence: 0.43
Image: Romanticism/gustave-dore_two-owls.jpg, Predicted: 22, Actual: 7,
Confidence: 0.35
Image: Romanticism/gustave-dore_paradise-lost-3.jpg, Predicted: 21, Actual: 7,
Confidence: 0.49
Image: Art_Nouveau_Modern/raphael-kirchner_girls-with-good-luck-charms-2.jpg,
Predicted: 19, Actual: 19, Confidence: 0.50
Image: Art_Nouveau_Modern/raphael-kirchner_santoy-1900-3.jpg, Predicted: 15,
Actual: 19, Confidence: 0.32
Image: Art_Nouveau_Modern/raphael-kirchner_geisha-4.jpg, Predicted: 19, Actual:
19, Confidence: 0.42
Image: Art_Nouveau_Modern/raphael-kirchner_boys-and-girls-at-sea-3.jpg,
Predicted: 15, Actual: 19, Confidence: 0.30
Image: Art Nouveau Modern/raphael-kirchner_unknown-1906.jpg, Predicted: 22,
Actual: 19, Confidence: 0.32
Image: Art_Nouveau_Modern/raphael-kirchner_unknown-17.jpg, Predicted: 12,
Actual: 19, Confidence: 0.30
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Image: Art_Nouveau_Modern/raphael-kirchner_sun-women-1901-4.jpg, Predicted: 1,

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Actual: 19, Confidence: 0.47
Image: Art_Nouveau_Modern/raphael-kirchner_girls-faces-in-a-circle-on-
violet.jpg, Predicted: 19, Actual: 19, Confidence: 0.39
Image: Art_Nouveau_Modern/raphael-kirchner_boys-and-girls-at-sea-5.jpg,
Predicted: 19, Actual: 19, Confidence: 0.44
Image: Art_Nouveau_Modern/raphael-kirchner_the-players-pastel-on-paper.jpg,
Predicted: 21, Actual: 19, Confidence: 0.38
Image: Art_Nouveau_Modern/raphael-kirchner_girls-and-eggs-1901-1.jpg, Predicted:
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Image: Art_Nouveau_Modern/raphael-kirchner_vivienne-segal-1.jpg, Predicted: 19,
Actual: 19, Confidence: 0.35
Image: Art_Nouveau_Modern/raphael-kirchner_viennese-1.jpg, Predicted: 19,
Actual: 19, Confidence: 0.42
Image: Art Nouveau Modern/raphael-kirchner nude-drawings.jpg, Predicted: 19,
Actual: 19, Confidence: 0.48
Image: Art_Nouveau_Modern/raphael-kirchner_boys-and-girls-at-sea-7.jpg,
Predicted: 1, Actual: 19, Confidence: 0.29
Image: Art_Nouveau_Modern/raphael-kirchner_laundry-woman.jpg, Predicted: 15,
Actual: 19, Confidence: 0.46
Image: Art_Nouveau_Modern/raphael-kirchner_unknown-1916-4.jpg, Predicted: 21,
Actual: 19, Confidence: 0.39
Image: Art_Nouveau_Modern/raphael-kirchner_from-arcadia.jpg, Predicted: 21,
Actual: 19, Confidence: 0.47
Image: Art_Nouveau_Modern/raphael-kirchner_single-items-6.jpg, Predicted: 5,
Actual: 19, Confidence: 0.46
Image: Art_Nouveau_Modern/raphael-kirchner_unknown-9.jpg, Predicted: 11, Actual:
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Image: Art_Nouveau_Modern/raphael-kirchner_sketch-for-single-items.jpg,
Predicted: 21, Actual: 19, Confidence: 0.42
Image: Art_Nouveau_Modern/raphael-kirchner_clovers-1899-2.jpg, Predicted: 1,
Actual: 19, Confidence: 0.27
Image: Art_Nouveau_Modern/raphael-kirchner_gleaner.jpg, Predicted: 5, Actual:
19, Confidence: 0.39
Image: Art_Nouveau_Modern/raphael-kirchner_salome-1903-2.jpg, Predicted: 8,
Actual: 19, Confidence: 0.34
Image: Art_Nouveau_Modern/raphael-kirchner_salome-1.jpg, Predicted: 15, Actual:
19, Confidence: 0.43
Image: Art_Nouveau_Modern/raphael-kirchner_the-gem-of-the-ocean-puck-
magazine-1916.jpg, Predicted: 14, Actual: 19, Confidence: 0.23
Image: Art_Nouveau_Modern/raphael-kirchner_nude-drawings-16.jpg, Predicted: 11,
Actual: 19, Confidence: 0.35
Image: Expressionism/salvador-dali untitled-after-the-night-by-michelangelo.jpg,
Predicted: 15, Actual: 21, Confidence: 0.33
Image: Naive_Art_Primitivism/salvador-dali_decalcomania.jpg, Predicted: 21,
Actual: 21, Confidence: 0.45
Image: Symbolism/salvador-dali_mulier-e-latere-viri-1967.jpg, Predicted: 21,
Actual: 21, Confidence: 0.47
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Image: Symbolism/salvador-dali_trulla-caementarii-in-manu-domini-

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amos-7-7-1967.jpg, Predicted: 21, Actual: 21, Confidence: 0.38
Image: Symbolism/salvador-dali_ecce-quasi-filius-hominis-in-nubibus-us-caeli-
ezekiel-1-4-1967.jpg, Predicted: 5, Actual: 21, Confidence: 0.43
Image: Realism/salvador-dali_jug-1923.jpg, Predicted: 21, Actual: 21,
Confidence: 0.49
Image: Expressionism/salvador-dali_untitled-female-nude-on-a-palette.jpg,
Predicted: 15, Actual: 21, Confidence: 0.35
Image: Expressionism/salvador-dali_the-unicorn-unfinished.jpg, Predicted: 20,
Actual: 21, Confidence: 0.26
Image: Cubism/salvador-dali_venus-and-sailor.jpg, Predicted: 15, Actual: 21,
Confidence: 0.47
Image: Expressionism/salvador-dali_scene-in-the-courtyard-of-the-escorial-with-
a-figure-in-the-foreground-inspired-by-michelangelo.jpg, Predicted: 21, Actual:
21, Confidence: 0.50
Image: Post_Impressionism/salvador-dali_portrait-of-luis-
bunuel-1900-83-1924.jpg, Predicted: 13, Actual: 21, Confidence: 0.42
Image: Post_Impressionism/salvador-dali_portrait-of-bobo-rockefeller-
unfinished.jpg, Predicted: 1, Actual: 21, Confidence: 0.44
Image: Realism/salvador-dali_duck.jpg, Predicted: 22, Actual: 21, Confidence:
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Image: Realism/salvador-dali_aurora-s-head-after-michelangelo-detail-of-a-
figure-on-the-grave-of-lorenzo-di-medici.jpg, Predicted: 9, Actual: 21,
Confidence: 0.38
Image: Realism/salvador-dali_galarina-1945.jpg, Predicted: 11, Actual: 21,
Confidence: 0.33
Image: Expressionism/salvador-dali_untitled-male-nude-in-a-landscape.jpg,
Predicted: 20, Actual: 21, Confidence: 0.40
Image: Realism/salvador-dali_sheep.jpg, Predicted: 20, Actual: 21, Confidence:
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Image: Realism/salvador-dali_dali-from-the-back-painting-gala-from-the-back-
eternalized-by-six-virtual-corneas-provisionally-1973.jpg, Predicted: 21,
Actual: 21, Confidence: 0.45
Image: Realism/salvador-dali_untitled-still-life-with-lilies.jpg, Predicted: 21,
Actual: 21, Confidence: 0.49
Image: Post_Impressionism/salvador-dali_portrait-of-maria-carbona-1.jpg,
Predicted: 16, Actual: 21, Confidence: 0.39
Image: Abstract Expressionism/salvador-dali christ-from-the-apocalypse-of-st-
john.jpg, Predicted: 19, Actual: 21, Confidence: 0.28
Image: Expressionism/salvador-dali_two-gypsy-lads-1921.jpg, Predicted: 12,
Actual: 21, Confidence: 0.41
Image: Symbolism/salvador-dali_angel-of-light.jpg, Predicted: 13, Actual: 21,
Confidence: 0.41
Image: Symbolism/salvador-dali_ionas-in-ventre-piscis-1967.jpg, Predicted: 5,
Actual: 21, Confidence: 0.32
Image: Expressionism/salvador-dali_sleeping-young-narcissus.jpg, Predicted: 5,
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Image: Realism/salvador-dali_untitled-still-life-with-white-cloth.jpg,
Predicted: 21, Actual: 21, Confidence: 0.49
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Image: Symbolism/salvador-dali_aquae-diluvii-super-terram-genesis-6-17-1967.jpg,
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Confidence: 0.36
Image: Realism/salvador-dali_gala-as-madonna-of-port-lligat.jpg, Predicted: 5,
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Image: Expressionism/salvador-dali_medea-or-jason-taking-possession-of-the-
golden-fleece.jpg, Predicted: 14, Actual: 21, Confidence: 0.40
Image: Cubism/salvador-dali_homage-to-erik-satie.jpg, Predicted: 15, Actual: 21,
Confidence: 0.47
Image: Symbolism/salvador-dali_the-gaseous-swan.jpg, Predicted: 21, Actual: 21,
Confidence: 0.37
Image: Symbolism/salvador-dali arca-foederis-1967.jpg, Predicted: 22, Actual:
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Image: Post_Impressionism/salvador-dali_female-seated-nud.jpg, Predicted: 15,
Actual: 21, Confidence: 0.50
Image: Impressionism/salvador-dali_llane-beach-cadaques.jpg, Predicted: 2,
Actual: 21, Confidence: 0.43
Image: Realism/salvador-dali_the-prince-of-sleep-el-principe-de-
ensueno-1979.jpg, Predicted: 15, Actual: 21, Confidence: 0.38
Image: Realism/salvador-dali_mme-reese.jpg, Predicted: 21, Actual: 21,
Confidence: 0.40
Image: Cubism/salvador-dali_crystalline-still-life.jpg, Predicted: 21, Actual:
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Image: Symbolism/salvador-dali_abraham-pater-multarem-gentium-
genesis-12-1f-1967.jpg, Predicted: 21, Actual: 21, Confidence: 0.44
Image: Symbolism/salvador-dali_nummularii-de-templo-eiecti-john-2-16-1967.jpg,
Predicted: 21, Actual: 21, Confidence: 0.42
Image: Abstract Expressionism/salvador-dali dali-s-moustache.jpg, Predicted: 19,
Actual: 21, Confidence: 0.39
Image: Post Impressionism/salvador-dali_landscape-near-cadaques-1921.jpg,
Predicted: 4, Actual: 21, Confidence: 0.34
Image: Post Impressionism/salvador-dali still-life-2.jpg, Predicted: 4, Actual:
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Image: Symbolism/salvador-dali_tu-est-petrus-mathew-16-15f-1967.jpg, Predicted:
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Image: Realism/salvador-dali_the-lacemaker-after-vermeer-1955.jpg, Predicted: 8,
Actual: 21, Confidence: 0.43
Image: Expressionism/salvador-dali_the-ants-1937.jpg, Predicted: 19, Actual: 21,
Confidence: 0.40
Image: Realism/salvador-dali_portrait-of-mrs-fagen.jpg, Predicted: 14, Actual:
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Image: Realism/salvador-dali_three-apparitions-of-the-visage-of-gala.jpg,
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Image: Expressionism/salvador-dali_crepuscular-old-man-1918.jpg, Predicted: 13,
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Image: Post_Impressionism/salvador-dali_port-alguer.jpg, Predicted: 21, Actual:
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Image: Expressionism/salvador-dali_portrait-of-jaume-miravidles-1922.jpg,
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cadaques-1921.jpg, Predicted: 21, Actual: 21, Confidence: 0.49
Image: Naive Art Primitivism/marc-chagall illustration-to-nikolai-gogol-s-dead-
souls-2.jpg, Predicted: 0, Actual: 12, Confidence: 0.30
Image: Naive_Art_Primitivism/marc-chagall_bushes-and-village-sketch-to-vitrage-
in-chapelle-des-cordeliers-in-sarrebourg-1976.jpg, Predicted: 13, Actual: 12,
Confidence: 0.45
Image: Naive_Art_Primitivism/marc-chagall_angel-with-a-sword-1956.jpg,
Predicted: 13, Actual: 12, Confidence: 0.32
Image: Naive Art_Primitivism/marc-chagall_moses-with-the-tablets-of-the-
law-1956.jpg, Predicted: 15, Actual: 12, Confidence: 0.37
Image: Naive Art_Primitivism/marc-chagall_sketch-for-meeting-of-isaac-and-
rebecca-1980.jpg, Predicted: 1, Actual: 12, Confidence: 0.50
Image: Naive_Art_Primitivism/marc-chagall_moses-1956.jpg, Predicted: 21, Actual:
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Image: Naive Art_Primitivism/marc-chagall_cain-and-abel-1960.jpg, Predicted: 12,
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Confidence: 0.44
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Image: Naive_Art_Primitivism/marc-chagall_spring-1938.jpg, Predicted: 12,
Actual: 12, Confidence: 0.48
Image: Naive_Art_Primitivism/marc-chagall_banquet-degenerates-into-brawl.jpg,
Predicted: 21, Actual: 12, Confidence: 0.34
Image: Cubism/marc-chagall_self-portrait-with-seven-digits-
autoportrait-1913.jpg, Predicted: 15, Actual: 12, Confidence: 0.48
Image: Naive_Art_Primitivism/marc-chagall_the-story-of-the-rooster-the-little-
goat.jpg, Predicted: 1, Actual: 12, Confidence: 0.38
Image: Naive_Art_Primitivism/marc-chagall_miriam-dances-1931.jpg, Predicted: 12,
Actual: 12, Confidence: 0.49
Image: Naive_Art_Primitivism/marc-chagall_the-circus-musicians.jpg, Predicted:
12, Actual: 12, Confidence: 0.44
Image: Naive_Art_Primitivism/marc-chagall_the-creation-of-man-1.jpg, Predicted:
20, Actual: 12, Confidence: 0.34
Image: Expressionism/marc-chagall red-nude-sitting-up-1908.jpg, Predicted: 15,
Actual: 12, Confidence: 0.42
Image: Naive Art_Primitivism/marc-chagall_the-blue-face-1967.jpg, Predicted: 21,
Actual: 12, Confidence: 0.49
Image: Naive Art_Primitivism/marc-chagall_bushes-and-birds-sketch-to-vitrage-in-
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chapelle-des-cordeliers-in-sarrebourg-1976.jpg, Predicted: 13, Actual: 12,

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Image: Naive_Art_Primitivism/marc-chagall_striking-the-rock-4.jpg, Predicted:
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Image: Naive Art_Primitivism/marc-chagall_study-to-striking-rock-1.jpg,
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Image: Expressionism/marc-chagall_musician-with-violin-1919.jpg, Predicted: 20,
Actual: 12, Confidence: 0.49
Image: Naive_Art_Primitivism/marc-chagall_the-tribe-of-benjamin-stained-glass-
window-for-the-synagogue-of-the-hadassh-hebrew-university-1962.jpg, Predicted:
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Image: Naive_Art_Primitivism/marc-chagall_the-tablets-of-law-1961.jpg,
Predicted: 20, Actual: 12, Confidence: 0.32
Image: Naive Art_Primitivism/marc-chagall_a-house-in-liozna-1908.jpg, Predicted:
2, Actual: 12, Confidence: 0.32
Image: Naive Art_Primitivism/marc-chagall_the-sacrifice-of-isaac-1.jpg,
Predicted: 1, Actual: 12, Confidence: 0.21
Image: Naive_Art_Primitivism/marc-chagall_jewish-wedding.jpg, Predicted: 21,
Actual: 12, Confidence: 0.34
Image: Naive Art_Primitivism/marc-chagall_tchitchikov-s-farewell-to-manilov.jpg,
Predicted: 1, Actual: 12, Confidence: 0.34
Image: Naive Art Primitivism/marc-chagall moses-casts-his-stick-that-
transformed-into-a-snake-on-the-orders-of-the-lord-that-referred-to-1931.jpg,
Predicted: 5, Actual: 12, Confidence: 0.42
Image: Naive_Art_Primitivism/marc-chagall_study-to-moses-with-the-burning-
bush.jpg, Predicted: 19, Actual: 12, Confidence: 0.39
Image: Naive_Art_Primitivism/marc-chagall_moses-and-aaron-1931.jpg, Predicted:
5, Actual: 12, Confidence: 0.24
Image: Cubism/marc-chagall bella-with-white-collar-1917.jpg, Predicted: 21,
Actual: 12, Confidence: 0.47
Image: Naive Art_Primitivism/marc-chagall_tree-of-life-sketch-to-vitrage-in-
chapelle-des-cordeliers-in-sarrebourg-1974.jpg, Predicted: 13, Actual: 12,
Confidence: 0.44
Image: Naive_Art_Primitivism/marc-chagall_the-summer-evening-1968.jpg,
Predicted: 18, Actual: 12, Confidence: 0.22
Image: Cubism/marc-chagall_grey-lovers-1917.jpg, Predicted: 12, Actual: 12,
Confidence: 0.30
Image: Naive_Art_Primitivism/marc-chagall_moses-with-the-burning-bush-3.jpg,
Predicted: 21, Actual: 12, Confidence: 0.46
Image: Naive_Art_Primitivism/marc-chagall_illustration-for-literary-review-
shtrom-heftn-1923.jpg, Predicted: 15, Actual: 12, Confidence: 0.34
Image: Expressionism/martiros-saryan_aragats-1928.jpg, Predicted: 18, Actual:
13, Confidence: 0.45
Image: Expressionism/martiros-saryan_still-life-1953.jpg, Predicted: 2, Actual:
13, Confidence: 0.34
Image: Expressionism/martiros-saryan_still-life-1961.jpg, Predicted: 14, Actual:
13, Confidence: 0.42
Image: Expressionism/martiros-saryan_design-for-opera-by-a-spendiarov-
almast-1939.jpg, Predicted: 14, Actual: 13, Confidence: 0.42
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Image: Expressionism/martiros-saryan_peonies-1916.jpg, Predicted: 13, Actual:

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13, Confidence: 0.49
Image: Expressionism/martiros-saryan_rural-landscape-1903.jpg, Predicted: 14,
Actual: 13, Confidence: 0.38
Image: Expressionism/martiros-saryan_mount-shamiram-1922.jpg, Predicted: 14,
Actual: 13, Confidence: 0.50
Image: Expressionism/martiros-saryan_to-the-spring-1927.jpg, Predicted: 15,
Actual: 13, Confidence: 0.33
Image: Expressionism/martiros-saryan_illustration-to-yeghishe-charents-country-
of-nairi-escape-of-nairyans-1933.jpg, Predicted: 12, Actual: 13, Confidence:
0.31
Image: Expressionism/martiros-saryan_from-the-artist-s-life-portrait-of-lusik-
saryan-in-profile-1941.jpg, Predicted: 16, Actual: 13, Confidence: 0.34
Image: Post_Impressionism/martiros-saryan_in-armenian-village-1901.jpg,
Predicted: 3, Actual: 13, Confidence: 0.49
Image: Realism/martiros-saryan_armenia-1934.jpg, Predicted: 13, Actual: 13,
Confidence: 0.48
Image: Expressionism/martiros-saryan_portrait-of-anna-akhmatova.jpg, Predicted:
5, Actual: 13, Confidence: 0.23
Image: Expressionism/martiros-saryan_landscape-with-capra-1913.jpg, Predicted:
4, Actual: 13, Confidence: 0.29
Image: Expressionism/martiros-saryan_buddhist-still-life-1919.jpg, Predicted: 1,
Actual: 13, Confidence: 0.34
Image: Realism/martiros-saryan_mount-ararat-1961.jpg, Predicted: 13, Actual: 13,
Confidence: 0.20
Image: Expressionism/martiros-saryan_constantinople-1910-1.jpg, Predicted: 13,
Actual: 13, Confidence: 0.50
Image: Expressionism/martiros-saryan_portrait-of-gayfejyan.jpg, Predicted: 1,
Actual: 13, Confidence: 0.32
Image: Expressionism/martiros-saryan_cover-of-armenian-folk-tales-by-i-
khatchatryantz-1946.jpg, Predicted: 1, Actual: 13, Confidence: 0.45
Image: Expressionism/martiros-saryan_yellow-flowers-1914.jpg, Predicted: 13,
Actual: 13, Confidence: 0.37
Image: Realism/martiros-saryan from-the-aragats-slopes-1951.jpg, Predicted: 13,
Actual: 13, Confidence: 0.32
Image: Realism/martiros-saryan spring-day-1935.jpg, Predicted: 4, Actual: 13,
Confidence: 0.23
Image: Expressionism/martiros-saryan_night-landscape-egypt-1911.jpg, Predicted:
21, Actual: 13, Confidence: 0.48
Image: Realism/martiros-saryan_spring-sun.jpg, Predicted: 13, Actual: 13,
Confidence: 0.29
Image: Expressionism/martiros-saryan_fantastic-landscape-settlement-in-the-
mountains-1972.jpg, Predicted: 1, Actual: 13, Confidence: 0.29
Image: Realism/martiros-saryan_still-life-1959.jpg, Predicted: 18, Actual: 13,
Confidence: 0.49
Image: Expressionism/martiros-saryan_egyptian-woman-1911.jpg, Predicted: 13,
Actual: 13, Confidence: 0.42
Image: Expressionism/martiros-saryan_walking-woman-1911.jpg, Predicted: 1,
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Actual: 13, Confidence: 0.40

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Image: Expressionism/martiros-saryan_in-yerevan-1908.jpg, Predicted: 15, Actual:
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Image: Symbolism/martiros-saryan_king-with-daughter-1904.jpg, Predicted: 1,
Actual: 13, Confidence: 0.34
Image: Realism/martiros-saryan_self-portrait-1902.jpg, Predicted: 5, Actual: 13,
Confidence: 0.36
Image: Naive_Art_Primitivism/martiros-saryan_illustration-to-armenian-folk-
tales-1937-8.jpg, Predicted: 22, Actual: 13, Confidence: 0.47
Image: Realism/john-singer-sargent_a-spanish-woman.jpg, Predicted: 11, Actual:
11, Confidence: 0.43
Image: Realism/john-singer-sargent_study-for-madame-x-1.jpg, Predicted: 15,
Actual: 11, Confidence: 0.32
Image: Impressionism/john-singer-sargent_study-of-polly-barnard-for-carnation-
lily-lily-rose.jpg, Predicted: 5, Actual: 11, Confidence: 0.50
Image: Impressionism/john-singer-sargent_the-old-chair.jpg, Predicted: 10,
Actual: 11, Confidence: 0.42
Image: Impressionism/john-singer-sargent_the-artist-sketching-1922.jpg,
Predicted: 2, Actual: 11, Confidence: 0.38
Image: Realism/john-singer-sargent_study-for-a-devil-and-victim-in-
judgement.jpg, Predicted: 1, Actual: 11, Confidence: 0.28
Image: Realism/john-singer-sargent_a-vele-gonfie-also-known-as-ena-
wertheimer-1904.jpg, Predicted: 11, Actual: 11, Confidence: 0.46
Image: Realism/john-singer-sargent_gordon-greenough-1880.jpg, Predicted: 1,
Actual: 11, Confidence: 0.40
{\tt Image: Impressionism/john-singer-sargent\_on-the-verandah-iron bound-island-iron}
maine.jpg, Predicted: 3, Actual: 11, Confidence: 0.35
Image: Impressionism/john-singer-sargent_venice-in-grey-weather.jpg, Predicted:
22, Actual: 11, Confidence: 0.20
Image: Realism/john-singer-sargent robert-louis-stevenson-and-his-wife-1885.jpg,
Predicted: 11, Actual: 11, Confidence: 0.42
Image: Realism/john-singer-sargent_study-for-madame-x.jpg, Predicted: 11,
Actual: 11, Confidence: 0.34
Image: Impressionism/john-singer-sargent_by-the-river-1888.jpg, Predicted: 8,
Actual: 11, Confidence: 0.46
Image: Impressionism/john-singer-sargent claude-monet-painting-by-the-edge-of-a-
wood-1885.jpg, Predicted: 3, Actual: 11, Confidence: 0.35
Image: Impressionism/john-singer-sargent_hills-of-galilee.jpg, Predicted: 18,
Actual: 11, Confidence: 0.47
Image: Realism/john-singer-sargent_nude-study.jpg, Predicted: 8, Actual: 11,
Confidence: 0.24
Image: Impressionism/john-singer-sargent_gypsy-encampment.jpg, Predicted: 4,
Actual: 11, Confidence: 0.24
Image: Realism/john-singer-sargent_mrs-charles-hunter.jpg, Predicted: 11,
Actual: 11, Confidence: 0.41
Image: Realism/john-singer-sargent_mrs-colin-hunter-1896.jpg, Predicted: 8,
Actual: 11, Confidence: 0.31
Image: Realism/john-singer-sargent_miss-elizabeth-williamson-1925.jpg,
Predicted: 11, Actual: 11, Confidence: 0.49
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Image: Realism/john-singer-sargent_alberto-falchetti.jpg, Predicted: 8, Actual:
11, Confidence: 0.38
Image: Realism/john-singer-sargent_a-backwater-at-calcot-near-reading-1888.jpg,
Predicted: 22, Actual: 11, Confidence: 0.25
Image: Realism/john-singer-sargent antonio-mancini-1902.jpg, Predicted: 17,
Actual: 11, Confidence: 0.30
Image: Realism/john-singer-sargent_portrait-of-katharine-chase-
shapleigh-1890.jpg, Predicted: 11, Actual: 11, Confidence: 0.46
Image: Realism/john-singer-sargent_helen-sears-1895.jpg, Predicted: 1, Actual:
11, Confidence: 0.28
Image: Impressionism/john-singer-sargent_roses.jpg, Predicted: 11, Actual: 11,
Confidence: 0.26
Image: Realism/john-singer-sargent_venetian-water-carriers-1882.jpg, Predicted:
5, Actual: 11, Confidence: 0.36
Image: Realism/john-singer-sargent_portrait-of-charles-martin-loeffler-1917.jpg,
Predicted: 7, Actual: 11, Confidence: 0.14
Image: Impressionism/john-singer-sargent_bedouin-women-carrying-water-
jars-1891.jpg, Predicted: 15, Actual: 11, Confidence: 0.49
Image: Impressionism/john-singer-sargent_the-sketchers-1914.jpg, Predicted: 11,
Actual: 11, Confidence: 0.43
Image: Realism/john-singer-sargent_portrait-of-dorothy-barnard-1889.jpg,
Predicted: 11, Actual: 11, Confidence: 0.49
{\tt Image: Impressionism/john-singer-sargent\_egyptians-raising-water-from-the-leaving-sargent\_egyptians-raising-water-from-the-leaving-sargent\_egyptians-raising-water-from-the-leaving-sargent\_egyptians-raising-water-from-the-leaving-sargent\_egyptians-raising-water-from-the-leaving-sargent\_egyptians-raising-water-from-the-leaving-sargent\_egyptians-raising-water-from-the-leaving-sargent\_egyptians-raising-water-from-the-leaving-sargent\_egyptians-raising-water-from-the-leaving-sargent\_egyptians-raising-water-from-the-leaving-sargent\_egyptians-raising-water-from-the-leaving-sargent\_egyptians-raising-water-from-the-leaving-sargent\_egyptians-raising-water-from-the-leaving-sargent\_egyptians-raising-water-from-the-leaving-sargent\_egyptians-raising-water-from-the-leaving-sargent-graduater-from-the-leaving-sargent-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-graduater-
nile-1891.jpg, Predicted: 11, Actual: 11, Confidence: 0.35
Image: Impressionism/john-singer-sargent_dorothy-barnard-1885.jpg, Predicted:
17, Actual: 11, Confidence: 0.23
Image: Realism/john-singer-sargent_engelsburg-1872.jpg, Predicted: 10, Actual:
11, Confidence: 0.46
Image: Impressionism/john-singer-sargent_a-garden-in-corfu-1909.jpg, Predicted:
3, Actual: 11, Confidence: 0.36
Image: Realism/john-singer-sargent_portrait-of-sir-max-michaelis-1925.jpg,
Predicted: 8, Actual: 11, Confidence: 0.36
Image: Impressionism/john-singer-sargent_home-fields.jpg, Predicted: 16, Actual:
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Image: Impressionism/john-singer-sargent_violet-resting-on-the-grass-1889.jpg,
Predicted: 11, Actual: 11, Confidence: 0.38
Image: Impressionism/john-singer-sargent_landscape-olive-trees-corfu-1909.jpg,
Predicted: 17, Actual: 11, Confidence: 0.38
Image: Impressionism/john-singer-sargent_palmettos-1917.jpg, Predicted: 22,
Actual: 11, Confidence: 0.34
Image: Impressionism/john-singer-sargent_egyptian-water-jars-1885.jpg,
Predicted: 18, Actual: 11, Confidence: 0.38
Image: Impressionism/john-singer-sargent_mediterranean-landscape.jpg, Predicted:
11, Actual: 11, Confidence: 0.30
Image: Impressionism/john-singer-sargent_the-birthday-party-1887.jpg, Predicted:
1, Actual: 11, Confidence: 0.27
Image: Realism/john-singer-sargent_mrs-frederick-barnard-1885.jpg, Predicted:
11, Actual: 11, Confidence: 0.43
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Image: Realism/john-singer-sargent_figure-studies-of-a-male-youth.jpg,
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Image: Realism/john-singer-sargent_nude-egyptian-girl-1891.jpg, Predicted: 11,
Actual: 11, Confidence: 0.34
Image: Impressionism/john-singer-sargent_caf-on-the-riva-degli-schiavoni.jpg,
Predicted: 5, Actual: 11, Confidence: 0.41
Image: Impressionism/john-singer-sargent oxen-on-the-beach-at-baia.jpg,
Predicted: 21, Actual: 11, Confidence: 0.48
Image: Impressionism/john-singer-sargent_lake-in-the-tyrol.jpg, Predicted: 8,
Actual: 11, Confidence: 0.43
Image: Symbolism/nicholas-roerich_dragging-portage-1915.jpg, Predicted: 4,
Actual: 14, Confidence: 0.29
Image: Art_Nouveau_Modern/nicholas-roerich_cabin-1912-1.jpg, Predicted: 14,
Actual: 14, Confidence: 0.42
Image: Symbolism/nicholas-roerich_yaroslav-the-wise-1941.jpg, Predicted: 13,
Actual: 14, Confidence: 0.41
Image: Realism/nicholas-roerich_sketch-of-man-s-head-self-portrait-1890.jpg,
Predicted: 0, Actual: 14, Confidence: 0.33
Image: Symbolism/nicholas-roerich_salome-with-head-of-st-john-the-baptist.jpg,
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Image: Art_Nouveau_Modern/nicholas-roerich_forest-1921.jpg, Predicted: 7,
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Image: Realism/nicholas-roerich_study-of-landscape.jpg, Predicted: 2, Actual:
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Image: Realism/nicholas-roerich_in-hayfields-of-tarakanovka-1893.jpg, Predicted:
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Image: Symbolism/nicholas-roerich_higher-than-mountains-1924.jpg, Predicted: 14,
Actual: 14, Confidence: 0.32
Image: Art_Nouveau_Modern/nicholas-roerich_kiss-the-earth-1912-3.jpg, Predicted:
22, Actual: 14, Confidence: 0.44
Image: Symbolism/nicholas-roerich study-of-clouds.jpg, Predicted: 4, Actual: 14,
Confidence: 0.41
Image: Symbolism/nicholas-roerich_monhigan-1922-1.jpg, Predicted: 15, Actual:
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Image: Symbolism/nicholas-roerich_she-who-leads-1944.jpg, Predicted: 0, Actual:
14, Confidence: 0.30
Image: Symbolism/nicholas-roerich_atlant-1921.jpg, Predicted: 12, Actual: 14,
Confidence: 0.40
Image: Art_Nouveau_Modern/nicholas-roerich_sketch-of-costumes-for-snow-
maiden-6.jpg, Predicted: 1, Actual: 14, Confidence: 0.30
Image: Realism/nicholas-roerich_sketch-of-landscape-and-clouds.jpg, Predicted:
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Image: Art_Nouveau_Modern/nicholas-roerich_a-path-1908.jpg, Predicted: 22,
Actual: 14, Confidence: 0.48
Image: Art_Nouveau_Modern/nicholas-roerich_polovtsian-camp-1908.jpg, Predicted:
3, Actual: 14, Confidence: 0.46
Image: Realism/nicholas-roerich_hellas-1893.jpg, Predicted: 17, Actual: 14,
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Image: Realism/nicholas-roerich_pen-drawing-of-two-idols-in-his-letter-to-v-
stasov-1901.jpg, Predicted: 22, Actual: 14, Confidence: 0.26
Image: Symbolism/nicholas-roerich_himalayas-1947.jpg, Predicted: 14, Actual: 14,
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Image: Art_Nouveau_Modern/nicholas-roerich_vignette-for-book-n-k-
roerich-1918-15.jpg, Predicted: 14, Actual: 14, Confidence: 0.36
Image: Realism/nicholas-roerich_stuffed-duck.jpg, Predicted: 18, Actual: 14,
Confidence: 0.24
Image: Art_Nouveau_Modern/nicholas-roerich_holy-martyr-1907.jpg, Predicted: 14,
Actual: 14, Confidence: 0.31
Image: Realism/nicholas-roerich messenger-clan-revolted-against-to-
clan-1897.jpg, Predicted: 11, Actual: 14, Confidence: 0.26
Image: Symbolism/nicholas-roerich_order-of-rigden-jyepo-study.jpg, Predicted:
21, Actual: 14, Confidence: 0.21
Image: Symbolism/nicholas-roerich_himalayas-1941-2.jpg, Predicted: 14, Actual:
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Image: Symbolism/nicholas-roerich_ancient-pskov-1936.jpg, Predicted: 2, Actual:
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Image: Symbolism/nicholas-roerich_white-cloud-1922.jpg, Predicted: 14, Actual:
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Image: Symbolism/nicholas-roerich_forging-the-sword-nibelung-1941.jpg,
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Image: Symbolism/nicholas-roerich_tibetian-dwellings.jpg, Predicted: 14, Actual:
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Image: Symbolism/nicholas-roerich_signs-of-christ-1924-1.jpg, Predicted: 14,
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Image: Realism/nicholas-roerich demosthenes-1893.jpg, Predicted: 20, Actual: 14,
Confidence: 0.35
Image: Realism/nicholas-roerich_sage-1897.jpg, Predicted: 0, Actual: 14,
Confidence: 0.30
Image: Art_Nouveau_Modern/nicholas-roerich_costume-design-for-tale-of-tsar-
saltan-1919.jpg, Predicted: 15, Actual: 14, Confidence: 0.33
Image: Symbolism/nicholas-roerich_santana-1928.jpg, Predicted: 22, Actual: 14,
Confidence: 0.47
Image: Symbolism/nicholas-roerich sketch-of-mural-with-the-buddhist-theme-for-
nicholas-roerich-museum-in-new-york-1927.jpg, Predicted: 22, Actual: 14,
Confidence: 0.22
Image: Realism/nicholas-roerich_stuffed-grouse.jpg, Predicted: 21, Actual: 14,
Confidence: 0.34
Image: Art_Nouveau_Modern/nicholas-roerich_lake-village-1915.jpg, Predicted: 14,
Actual: 14, Confidence: 0.49
Image: Art Nouveau Modern/nicholas-roerich_untitled-1916-1.jpg, Predicted: 1,
Actual: 14, Confidence: 0.48
Image: Symbolism/nicholas-roerich_vitrage-1929.jpg, Predicted: 0, Actual: 14,
Confidence: 0.47
Image: Symbolism/nicholas-roerich_boundary-of-kingdoms-1916.jpg, Predicted: 10,
Actual: 14, Confidence: 0.42
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Image: Realism/nicholas-roerich_study-1901-1.jpg, Predicted: 16, Actual: 14,

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Image: Realism/boris-kustodiev_group-portrait-of-painters-of-the-world-of-
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Image: Art_Nouveau_Modern/boris-kustodiev_february-27-1917.jpg, Predicted: 3,
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Image: Art_Nouveau_Modern/boris-kustodiev_the-merchant-s-wife-at-tea-1920.jpg,
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Image: Art Nouveau Modern/boris-kustodiev bather-seated-on-the-shore-1926.jpg,
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Image: Realism/boris-kustodiev_assistant-minister-of-interior-count-a-p-
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Image: Realism/boris-kustodiev_children-1900.jpg, Predicted: 11, Actual: 1,
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Image: Post Impressionism/paul-cezanne harlequin-1890-1.jpg, Predicted: 16,
Actual: 16, Confidence: 0.48
Image: Impressionism/paul-cezanne_eremitage-pontoise-1874.jpg, Predicted: 1,
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Image: Cubism/paul-cezanne still-life-with-three-skulls.jpg, Predicted: 11,
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Image: Romanticism/paul-cezanne_mont-sainte-victoire-1867.jpg, Predicted: 16,
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Image: Post_Impressionism/paul-cezanne_houses-on-the-hill.jpg, Predicted: 22,
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Image: Post_Impressionism/paul-cezanne_self-portrait-1882.jpg, Predicted: 16,
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Image: Post_Impressionism/paul-cezanne_madame-cezanne-in-a-striped-rob.jpg,
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Image: Post_Impressionism/paul-cezanne_still-life-with-pomegranate-and-
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Image: Post_Impressionism/paul-cezanne_self-portrait-3.jpg, Predicted: 18,
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Image: Post_Impressionism/paul-cezanne_peasant-1891.jpg, Predicted: 16, Actual:
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Image: Romanticism/paul-cezanne_the-feast-1867.jpg, Predicted: 0, Actual: 16,
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Image: Post_Impressionism/paul-cezanne_portrait-of-madame-cezanne.jpg,
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Image: Impressionism/pierre-auguste-renoir_woman-in-a-garden-woman-with-a-
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Image: Impressionism/pierre-auguste-renoir_still-life-with-peaches-and-
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marguerite-1884.jpg, Predicted: 1, Actual: 17, Confidence: 0.39
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Image: Impressionism/pierre-auguste-renoir_young-woman-on-a-bench-1875.jpg,
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Image: Baroque/rembrandt_large-self-portrait-1652.jpg, Predicted: 11, Actual:
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Image: Baroque/rembrandt_a-young-man-and-a-girl-playing-cards.jpg, Predicted:
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chair-1633.jpg, Predicted: 1, Actual: 20, Confidence: 0.27
Image: Baroque/rembrandt_the-stone-bridge.jpg, Predicted: 10, Actual: 20,
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Image: Baroque/rembrandt_eliezer-and-rebecca-at-the-well-1640.jpg, Predicted:
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Image: Baroque/rembrandt_self-portrait-in-at-the-age-of-63-1669.jpg, Predicted:
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Image: Baroque/rembrandt_the-polish-rider-1655.jpg, Predicted: 5, Actual: 20,
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Image: Baroque/rembrandt_the-flight-into-egypt.jpg, Predicted: 20, Actual: 20,
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Image: Baroque/rembrandt_the-flight-into-egypt-called-in-the-style-of-
elzheimer-1653.jpg, Predicted: 10, Actual: 20, Confidence: 0.48
Image: Baroque/rembrandt_saskia-looking-out-of-a-window-1635.jpg, Predicted: 15,
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Image: Baroque/rembrandt self-portrait-with-beret-and-turned-up-collar-1659.jpg,
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Image: Realism/ivan-shishkin_bull-1863.jpg, Predicted: 22, Actual: 10,
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Image: Realism/ivan-shishkin_tree-roots.jpg, Predicted: 7, Actual: 10,
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Image: Realism/ivan-shishkin_winter-moscow-suburbs.jpg, Predicted: 4, Actual:
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Image: Realism/ivan-shishkin_pines-sunny-day.jpg, Predicted: 10, Actual: 10,
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Image: Realism/ivan-shishkin_stones.jpg, Predicted: 8, Actual: 10, Confidence:
Image: Realism/ivan-shishkin_pines-1895.jpg, Predicted: 10, Actual: 10,
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Image: Realism/ivan-shishkin broken-birch-1872.jpg, Predicted: 0, Actual: 10,
Confidence: 0.45
Image: Realism/ivan-shishkin_ravines.jpg, Predicted: 10, Actual: 10, Confidence:
0.39
Image: Northern Renaissance/albrecht-durer portrait-of-hieronymus-
holzschuher-1526-1.jpg, Predicted: 14, Actual: 0, Confidence: 0.49
Image: Northern_Renaissance/albrecht-durer_portrait-of-elector-frederick-the-
wise-of-saxony-1496.jpg, Predicted: 15, Actual: 0, Confidence: 0.33
Image: Northern Renaissance/albrecht-durer st-apollonia-1521.jpg, Predicted: 15,
Actual: 0, Confidence: 0.31
Image: Northern Renaissance/albrecht-durer house-by-a-pond.jpg, Predicted: 17,
Actual: 0, Confidence: 0.45
Image: Northern_Renaissance/albrecht-durer_penitent-jerome-1497.jpg, Predicted:
0, Actual: 0, Confidence: 0.22
Image: Northern_Renaissance/albrecht-durer_allegory-of-justice-1498.jpg,
Predicted: 22, Actual: 0, Confidence: 0.33
Image: Northern_Renaissance/albrecht-durer_christ-among-the-doctors-1506.jpg,
Predicted: 5, Actual: 0, Confidence: 0.47
Image: Northern_Renaissance/albrecht-durer_drummers-and-pipers.jpg, Predicted:
15, Actual: 0, Confidence: 0.41
Image: Northern_Renaissance/albrecht-durer_tilo-on-the-cantilever-of-a-
bastion.jpg, Predicted: 2, Actual: 0, Confidence: 0.27
Image: Northern_Renaissance/albrecht-durer_the-sorrows-1497.jpg, Predicted: 11,
Actual: 0, Confidence: 0.33
Image: Northern Renaissance/albrecht-durer primula.jpg, Predicted: 0, Actual: 0,
Confidence: 0.43
Image: Northern_Renaissance/albrecht-durer_the-imperial-crown.jpg, Predicted:
15, Actual: 0, Confidence: 0.44
Image: Northern_Renaissance/albrecht-durer_portrait-of-a-man-with-baret-and-
scroll-1521.jpg, Predicted: 0, Actual: 0, Confidence: 0.39
Image: Northern_Renaissance/albrecht-durer_the-lady-of-the-festival-du-rosaire-
fragment-2.jpg, Predicted: 5, Actual: 0, Confidence: 0.43
Image: Northern Renaissance/albrecht-durer small-passion-title-page.jpg,
Predicted: 22, Actual: 0, Confidence: 0.44
Image: Northern Renaissance/albrecht-durer hercules-kills-the-symphalic-
bird-1520.jpg, Predicted: 15, Actual: 0, Confidence: 0.44
Image: Northern_Renaissance/albrecht-durer_wappen-pirckheimer.jpg, Predicted:
11, Actual: 0, Confidence: 0.36
Image: Northern_Renaissance/albrecht-durer_albrecht-durer-s-father-1497.jpg,
Predicted: 20, Actual: 0, Confidence: 0.30
Image: Northern_Renaissance/albrecht-durer_the-mantle-of-the-pope.jpg,
Predicted: 20, Actual: 0, Confidence: 0.50
Image: Northern Renaissance/albrecht-durer_man-aged-93-brush-ink-on-
paper-1521.jpg, Predicted: 20, Actual: 0, Confidence: 0.41
Image: Northern_Renaissance/albrecht-durer_the-adoration-of-the-holy-trinity-
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landauer-altar-1511.jpg, Predicted: 5, Actual: 0, Confidence: 0.39

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Image: Northern_Renaissance/albrecht-durer_design-to-a-court-dress.jpg,
Predicted: 0, Actual: 0, Confidence: 0.49
Image: Northern_Renaissance/albrecht-durer_amorous-peasants.jpg, Predicted: 15,
Actual: 0, Confidence: 0.42
Image: Northern_Renaissance/albrecht-durer_head-of-a-young-woman.jpg, Predicted:
11, Actual: 0, Confidence: 0.36
Image: Northern Renaissance/albrecht-durer back-figure.jpg, Predicted: 0,
Actual: 0, Confidence: 0.44
Image: Northern_Renaissance/albrecht-durer_heller-altarpiece.jpg, Predicted: 0,
Actual: 0, Confidence: 0.36
Image: Northern Renaissance/albrecht-durer_jesus-boy-with-globe-1493.jpg,
Predicted: 2, Actual: 0, Confidence: 0.48
Image: Northern_Renaissance/albrecht-durer_hands-of-an-apostle.jpg, Predicted:
14, Actual: 0, Confidence: 0.39
Image: Northern_Renaissance/albrecht-durer_pine-1497.jpg, Predicted: 1, Actual:
0, Confidence: 0.22
Image: Northern_Renaissance/albrecht-durer_man-of-sorrows-with-hands-
bound-1512.jpg, Predicted: 12, Actual: 0, Confidence: 0.28
Image: Northern_Renaissance/albrecht-durer_paumgartner-altar.jpg, Predicted: 1,
Actual: 0, Confidence: 0.33
Image: Realism/ilya-repin_madonna-with-child-1896.jpg, Predicted: 8, Actual: 8,
Confidence: 0.34
Image: Realism/ilya-repin_send-off-of-recruit-1879.jpg, Predicted: 5, Actual: 8,
Confidence: 0.36
Image: Realism/ilya-repin_portrait-of-the-artist-i-s-ostroukhov-1913.jpg,
Predicted: 8, Actual: 8, Confidence: 0.40
Image: Realism/ilya-repin_raising-of-jairus-daughter3-1871.jpg, Predicted: 22,
Actual: 8, Confidence: 0.25
Image: Realism/ilya-repin_kubana-1883.jpg, Predicted: 7, Actual: 8, Confidence:
0.33
Image: Realism/ilya-repin_portrait-of-a-i-shevtsov-1869.jpg, Predicted: 8,
Actual: 8, Confidence: 0.21
Image: Realism/ilya-repin_sermon-of-josaphat-kuntsevich-in-belarus-1893.jpg,
Predicted: 8, Actual: 8, Confidence: 0.36
Image: Realism/ilya-repin_in-the-hut-1878.jpg, Predicted: 8, Actual: 8,
Confidence: 0.42
Image: Realism/ilya-repin_cry-of-prophet-jeremiah-on-the-ruins-of-jerusalem-on-
a-bible-subject-1870.jpg, Predicted: 16, Actual: 8, Confidence: 0.21
Image: Realism/ilya-repin_portrait-of-anton-rubinstein-1915.jpg, Predicted: 8,
Actual: 8, Confidence: 0.41
Image: Realism/ilya-repin_christ-1884.jpg, Predicted: 2, Actual: 8, Confidence:
0.22
Image: Realism/ilya-repin_in-the-upper-tier-of-the-theater-1920.jpg, Predicted:
12, Actual: 8, Confidence: 0.49
Image: Realism/ilya-repin_diogenes-and-the-boy-1867.jpg, Predicted: 17, Actual:
8, Confidence: 0.35
Image: Realism/ilya-repin_jesus-in-a-crown-of-thorns-1913.jpg, Predicted: 2,
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Actual: 8, Confidence: 0.34

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Image: Realism/ilya-repin_portrait-of-writer-vladimir-grigorievich-
chertkov-1890.jpg, Predicted: 8, Actual: 8, Confidence: 0.32
Image: Realism/ilya-repin_sadko-in-the-underwater-kingdom-1875.jpg, Predicted:
8, Actual: 8, Confidence: 0.48
Image: Realism/ilya-repin_leisure-1882.jpg, Predicted: 8, Actual: 8, Confidence:
Image: Realism/ilya-repin portrait-of-the-composer-anton-rubinstein-1887.jpg,
Predicted: 8, Actual: 8, Confidence: 0.27
Image: Realism/ilya-repin_christ-and-nicodemus-1887.jpg, Predicted: 1, Actual:
8, Confidence: 0.20
Image: Realism/ilya-repin portrait-of-nadezhda-borisovna-nordman-
severova-1909.jpg, Predicted: 11, Actual: 8, Confidence: 0.34
Image: Realism/ilya-repin_nude-model-from-behind-1896.jpg, Predicted: 21,
Actual: 8, Confidence: 0.48
Image: Realism/ilya-repin_portrait-of-vera-shevtsova-1869.jpg, Predicted: 16,
Actual: 8, Confidence: 0.30
Image: Realism/ilya-repin_rest-portrait-of-vera-repina-the-artist-s-
wife-1882.jpg, Predicted: 8, Actual: 8, Confidence: 0.48
Image: Realism/ilya-repin_portrait-of-v-e-repin-the-artist-s-brother-1867.jpg,
Predicted: 8, Actual: 8, Confidence: 0.40
Image: Realism/ilya-repin_the-village-of-mokhnachi-near-chuguyev-1877.jpg,
Predicted: 8, Actual: 8, Confidence: 0.33
Image: Realism/ilya-repin_tatyana-repina-the-artist-s-mother-1867.jpg,
Predicted: 8, Actual: 8, Confidence: 0.25
Image: Realism/ilya-repin_a-pushkin-on-the-act-in-the-lyceum-on-
jan-8-1815-1911.jpg, Predicted: 8, Actual: 8, Confidence: 0.46
Image: Realism/ilya-repin dancing-woman.jpg, Predicted: 8, Actual: 8,
Confidence: 0.27
Image: Realism/ilya-repin_hopak-1927.jpg, Predicted: 11, Actual: 8, Confidence:
0.41
Image: Impressionism/ilya-repin_on-the-shore-of-the-gulf-of-finland-1903.jpg,
Predicted: 4, Actual: 8, Confidence: 0.20
Image: Realism/ilya-repin_burlak-1-1870.jpg, Predicted: 22, Actual: 8,
Confidence: 0.43
Image: Impressionism/ilya-repin_on-palace-square-in-st-petersburg-1905.jpg,
Predicted: 1, Actual: 8, Confidence: 0.45
Image: Realism/ilya-repin_seamstress-1882.jpg, Predicted: 8, Actual: 8,
Confidence: 0.47
Image: Realism/ilya-repin_woman-playing-with-umbrella-1874.jpg, Predicted: 1,
Actual: 8, Confidence: 0.38
Image: Realism/ilya-repin_interior-etude-1883.jpg, Predicted: 8, Actual: 8,
Confidence: 0.38
Image: Realism/ilya-repin_portrait-of-the-artist-a-p-bogolubov-1882.jpg,
Predicted: 8, Actual: 8, Confidence: 0.42
Image: Realism/ilya-repin_cossack-in-the-steppe.jpg, Predicted: 3, Actual: 8,
Confidence: 0.22
Image: Realism/ilya-repin_the-merchant-kalashnikov-1868.jpg, Predicted: 8,
Actual: 8, Confidence: 0.36
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Image: Realism/ilya-repin_street-of-the-snakes-in-seville-1883.jpg, Predicted:
16, Actual: 8, Confidence: 0.32
Image: Realism/ilya-repin_cossacks-on-the-black-sea-1908.jpg, Predicted: 3,
Actual: 8, Confidence: 0.35
Image: Realism/ilya-repin_portrait-of-b-a-kaminka-1908.jpg, Predicted: 1,
Actual: 8, Confidence: 0.38
Image: Realism/ilya-repin_portrait-of-maxim-gorky-1899.jpg, Predicted: 8,
Actual: 8, Confidence: 0.49
Image: Realism/ilya-repin_nun-1887.jpg, Predicted: 15, Actual: 8, Confidence:
0.49
Image: Realism/ilya-repin_n-a-mudrogel-in-the-pose-of-pavel-tretyakov-in-halls-
of-the-gallery-1904.jpg, Predicted: 2, Actual: 8, Confidence: 0.36
Image: Impressionism/edgar-degas_before-the-ballet-detail-1892-1.jpg, Predicted:
14, Actual: 5, Confidence: 0.46
Image: Impressionism/edgar-degas_portrait-of-josephine-gaujelin-1867.jpg,
Predicted: 5, Actual: 5, Confidence: 0.25
Image: Impressionism/edgar-degas_head-of-a-young-roman-girl-1856.jpg, Predicted:
11, Actual: 5, Confidence: 0.42
Image: Impressionism/edgar-degas_head-of-a-young-woman-1867.jpg, Predicted: 17,
Actual: 5, Confidence: 0.44
Image: Impressionism/edgar-degas_les-pointes-1878.jpg, Predicted: 17, Actual: 5,
Confidence: 0.40
Image: Impressionism/edgar-degas_self-portrait-in-a-soft-hat-1858.jpg,
Predicted: 5, Actual: 5, Confidence: 0.31
Image: Impressionism/edgar-degas_ludovic-halevy-speaking-with-madame-
cardinal.jpg, Predicted: 4, Actual: 5, Confidence: 0.32
Image: Impressionism/edgar-degas_leaving-the-bath-1885-1.jpg, Predicted: 5,
Actual: 5, Confidence: 0.27
Image: Impressionism/edgar-degas_the-bath-1.jpg, Predicted: 17, Actual: 5,
Confidence: 0.42
Image: Impressionism/edgar-degas_general-mellinet-and-chief-rabbi-
astruc-1871.jpg, Predicted: 8, Actual: 5, Confidence: 0.35
Image: Impressionism/edgar-degas woman-ironing-1886.jpg, Predicted: 5, Actual:
5, Confidence: 0.49
Image: Impressionism/edgar-degas_woman-brushing-her-hair-1.jpg, Predicted: 19,
Actual: 5, Confidence: 0.36
Image: Impressionism/edgar-degas_retiring-1883.jpg, Predicted: 5, Actual: 5,
Confidence: 0.40
Image: Impressionism/edgar-degas_portrait-of-mary-cassatt.jpg, Predicted: 5,
Actual: 5, Confidence: 0.49
Image: Impressionism/edgar-degas_three-ballet-dancers-1879.jpg, Predicted: 21,
Actual: 5, Confidence: 0.21
Image: Impressionism/edgar-degas_the-bath-1890.jpg, Predicted: 18, Actual: 5,
Confidence: 0.50
Image: Impressionism/edgar-degas_make-an-attempt-second-version-1877.jpg,
Predicted: 12, Actual: 5, Confidence: 0.30
Image: Impressionism/edgar-degas_beach-with-sailing-boats.jpg, Predicted: 4,
Actual: 5, Confidence: 0.29
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Image: Impressionism/edgar-degas_the-duchess-de-montejasi-and-her-daughters-
elena-and-camilla.jpg, Predicted: 5, Actual: 5, Confidence: 0.27
Image: Impressionism/edgar-degas_woman-with-an-umbrella.jpg, Predicted: 17,
Actual: 5, Confidence: 0.21
Image: Impressionism/edgar-degas_the-festival-of-the-owner-1877.jpg, Predicted:
17, Actual: 5, Confidence: 0.50
Image: Impressionism/edgar-degas_the-start-of-the-hunt.jpg, Predicted: 5,
Actual: 5, Confidence: 0.50
Image: Impressionism/edgar-degas_degas-father-listening-to-lorenzo-
pagans-1870.jpg, Predicted: 5, Actual: 5, Confidence: 0.41
Image: Impressionism/edgar-degas_two-dancers-2.jpg, Predicted: 5, Actual: 5,
Confidence: 0.47
Image: Impressionism/edgar-degas promenade-by-the-sea.jpg, Predicted: 2, Actual:
5, Confidence: 0.38
Image: Impressionism/edgar-degas_a-woman-seated-beside-a-vase-of-
flowers-1865.jpg, Predicted: 2, Actual: 5, Confidence: 0.26
Image: Post_Impressionism/pyotr-konchalovsky_oak-grove-illuminated-by-the-
sun-1920.jpg, Predicted: 11, Actual: 18, Confidence: 0.49
Image: Post_Impressionism/pyotr-konchalovsky_spain-kaldetes-oliva-1910.jpg,
Predicted: 13, Actual: 18, Confidence: 0.39
Image: Realism/pyotr-konchalovsky_daisies-1935-1.jpg, Predicted: 0, Actual: 18,
Confidence: 0.44
Image: Realism/pyotr-konchalovsky_dobroye-the-bridge-1931.jpg, Predicted: 22,
Actual: 18, Confidence: 0.25
Image: Post_Impressionism/pyotr-konchalovsky_fisherman-s-landscape.jpg,
Predicted: 4, Actual: 18, Confidence: 0.47
Image: Realism/pyotr-konchalovsky_children-in-the-park-1940.jpg, Predicted: 4,
Actual: 18, Confidence: 0.34
Image: Realism/pyotr-konchalovsky_pushkin-at-the-mikhailovsky.jpg, Predicted: 8,
Actual: 18, Confidence: 0.47
Image: Expressionism/pyotr-konchalovsky_family-portrait-against-chinese-
panel-1911.jpg, Predicted: 18, Actual: 18, Confidence: 0.34
Image: Expressionism/pyotr-konchalovsky_siena-the-square-1912.jpg, Predicted:
18, Actual: 18, Confidence: 0.36
Image: Realism/pyotr-konchalovsky_still-life-with-cabbage-1937.jpg, Predicted:
17, Actual: 18, Confidence: 0.48
Image: Realism/pyotr-konchalovsky_spring-landscape-with-train-1931.jpg,
Predicted: 8, Actual: 18, Confidence: 0.31
Image: Post_Impressionism/pyotr-konchalovsky_portrait-of-zinaida-
kozhukhovskaya-1906.jpg, Predicted: 8, Actual: 18, Confidence: 0.34
Image: Realism/pyotr-konchalovsky_lilacs-1.jpg, Predicted: 4, Actual: 18,
Confidence: 0.41
Image: Realism/pyotr-konchalovsky_katya-by-the-window-1935.jpg, Predicted: 1,
Actual: 18, Confidence: 0.43
Image: Realism/pyotr-konchalovsky_alder-against-the-sun-1932.jpg, Predicted: 17,
Actual: 18, Confidence: 0.35
Image: Art_Nouveau_Modern/pyotr-konchalovsky_costume-design-for-the-opera-don-
giovanni-by-wolfgang-amadeus-mozart-don-giovanni-1913.jpg, Predicted: 14,
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Actual: 18, Confidence: 0.37
Image: Post_Impressionism/pyotr-konchalovsky_veliky-novgorod-1926-1.jpg,
Predicted: 16, Actual: 18, Confidence: 0.45
Image: Cubism/pyotr-konchalovsky_landscape-1912.jpg, Predicted: 16, Actual: 18,
Confidence: 0.32
Image: Realism/pyotr-konchalovsky_self-portrait-in-yellow-shirt-1943.jpg,
Predicted: 2, Actual: 18, Confidence: 0.45
Image: Fauvism/pyotr-konchalovsky_still-life-with-red-gladioli-1915.jpg,
Predicted: 13, Actual: 18, Confidence: 0.38
Image: Post_Impressionism/pyotr-konchalovsky_seated-nude.jpg, Predicted: 11,
Actual: 18, Confidence: 0.44
Image: Cubism/pyotr-konchalovsky_agave-1916.jpg, Predicted: 18, Actual: 18,
Confidence: 0.45
Image: Realism/pyotr-konchalovsky_blue-vase-1949.jpg, Predicted: 1, Actual: 18,
Confidence: 0.24
Image: Impressionism/pyotr-konchalovsky_belkino-garden-1907-1.jpg, Predicted: 3,
Actual: 18, Confidence: 0.49
Image: Expressionism/pyotr-konchalovsky_house-in-abramtsevo-1911.jpg, Predicted:
22, Actual: 18, Confidence: 0.27
Image: Cubism/pyotr-konchalovsky_abramtsevo-the-trees-1920.jpg, Predicted: 13,
Actual: 18, Confidence: 0.46
Image: Post_Impressionism/pyotr-konchalovsky_spinner-drawing-for-the-painting-
spinner-1926.jpg, Predicted: 22, Actual: 18, Confidence: 0.46
Image: Post_Impressionism/pyotr-konchalovsky_gardener-1908.jpg, Predicted: 22,
Actual: 18, Confidence: 0.40
Image: Post Impressionism/pablo-picasso_pierrot-and-colombina-1900.jpg,
Predicted: 5, Actual: 15, Confidence: 0.36
Image: Post_Impressionism/pablo-picasso_a-boat-on-the-canal-1905.jpg, Predicted:
11, Actual: 15, Confidence: 0.23
Image: Post_Impressionism/pablo-picasso_the-three-dutchwoman-1905.jpg,
Predicted: 8, Actual: 15, Confidence: 0.32
Image: Naive_Art_Primitivism/pablo-picasso_las-meninas-velazquez-1957-3.jpg,
Predicted: 15, Actual: 15, Confidence: 0.48
Image: Expressionism/pablo-picasso_head-of-a-woman-with-green-curls-1946.jpg,
Predicted: 13, Actual: 15, Confidence: 0.44
Image: Analytical_Cubism/pablo-picasso_still-life-with-bottle-of-anis-del-
mono-1909.jpg, Predicted: 16, Actual: 15, Confidence: 0.40
Image: Cubism/pablo-picasso_bull-study-1946.jpg, Predicted: 14, Actual: 15,
Confidence: 0.40
Image: Pointillism/pablo-picasso_the-happy-family.jpg, Predicted: 2, Actual: 15,
Confidence: 0.49
Image: Impressionism/pablo-picasso head-of-woman-1901.jpg, Predicted: 17,
Actual: 15, Confidence: 0.28
Image: Post_Impressionism/pablo-picasso_mother-and-child-1905.jpg, Predicted:
15, Actual: 15, Confidence: 0.37
Image: Naive_Art_Primitivism/pablo-picasso_dancer-1954.jpg, Predicted: 21,
Actual: 15, Confidence: 0.45
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Image: Realism/pablo-picasso_dutch-girl-1905.jpg, Predicted: 5, Actual: 15,

Confidence: 0.50 Image: Symbolism/pablo-picasso_madonna-with-garland-1904.jpg, Predicted: 12, Actual: 15, Confidence: 0.47 Image: Post_Impressionism/pablo-picasso_pierreuse-with-her-hand-on-hershoulder-1901.jpg, Predicted: 17, Actual: 15, Confidence: 0.33 Image: Expressionism/pablo-picasso_naked-woman-with-dripping-hair-1902.jpg, Predicted: 15, Actual: 15, Confidence: 0.32 Image: Symbolism/pablo-picasso_crouching-woman-1902.jpg, Predicted: 12, Actual: 15, Confidence: 0.36 Image: Post_Impressionism/pablo-picasso_woman-with-blue-hat-1901.jpg, Predicted: 5, Actual: 15, Confidence: 0.47 Image: Expressionism/pablo-picasso_studio-pigeons-perch-1960.jpg, Predicted: 15, Actual: 15, Confidence: 0.42 Image: Post Impressionism/pablo-picasso_still-life-with-vases-1906.jpg, Predicted: 22, Actual: 15, Confidence: 0.29 Image: Post_Impressionism/pablo-picasso_harlequin-s-head-1905.jpg, Predicted: 15, Actual: 15, Confidence: 0.37 Image: Expressionism/pablo-picasso_self-portrait-1901.jpg, Predicted: 15, Actual: 15, Confidence: 0.21 Image: Expressionism/pablo-picasso_niko-pirosmani-1972(1).jpg, Predicted: 21, Actual: 15, Confidence: 0.29 Image: Impressionism/pablo-picasso_view-of-the-port-of-valencia.jpg, Predicted: 22, Actual: 15, Confidence: 0.44 Image: Post_Impressionism/pablo-picasso_boy-with-bouquet-of-flowers-in-hishand-1905.jpg, Predicted: 17, Actual: 15, Confidence: 0.48 Image: Expressionism/pablo-picasso_fernande-s-head-1906.jpg, Predicted: 15, Actual: 15, Confidence: 0.46 Image: Expressionism/pablo-picasso_minotaur-with-dead-horse-in-front-of-a-cavefacing-a-girl-in-veil-1936.jpg, Predicted: 21, Actual: 15, Confidence: 0.50 Image: Post_Impressionism/pablo-picasso_woman-on-a-donkey-1906.jpg, Predicted: 15, Actual: 15, Confidence: 0.39 Image: Naive_Art_Primitivism/pablo-picasso_a-horsewoman-1905.jpg, Predicted: 2, Actual: 15, Confidence: 0.40 Image: Expressionism/pablo-picasso_artist-s-son-1925.jpg, Predicted: 15, Actual: 15, Confidence: 0.39 Image: Expressionism/pablo-picasso_untitled-1971-1.jpg, Predicted: 0, Actual: 15, Confidence: 0.46 Image: Expressionism/pablo-picasso_madame-soler-1905.jpg, Predicted: 21, Actual: 15, Confidence: 0.29 Image: Realism/pablo-picasso_the-old-fisherman-1895.jpg, Predicted: 8, Actual: 15, Confidence: 0.34 Image: Naive_Art_Primitivism/pablo-picasso_the-eight-names-of-picasso-1970.jpg, Predicted: 0, Actual: 15, Confidence: 0.32 Image: Expressionism/pablo-picasso_untitled-1958-1.jpg, Predicted: 15, Actual: 15, Confidence: 0.46

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Image: Northern Renaissance/albrecht-durer landsknecht.jpg, Predicted: 0,

Outlier detection accuracy by confidence: 0.70

Embedding-based outliers:

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Actual: 0
Image: Northern_Renaissance/albrecht-durer_the-piece-of-turf-with-the-
columbine.jpg, Predicted: 10, Actual: 0
Image: Northern_Renaissance/albrecht-durer_study-sheets-with-children-s-
heads.jpg, Predicted: 0, Actual: 0
Image: Realism/ivan-shishkin_pines-1895.jpg, Predicted: 10, Actual: 10
Image: Realism/ivan-shishkin_part-of-the-trunk-of-a-pine-mary-howe-1890.jpg,
Predicted: 10, Actual: 10
Image: Northern_Renaissance/albrecht-durer_st-catherine.jpg, Predicted: 0,
Actual: 0
Image: Northern_Renaissance/albrecht-durer_st-magdalena.jpg, Predicted: 0,
Actual: 0
Image: Northern_Renaissance/albrecht-durer_virgin-mary-suckling-the-christ-
child-1512.jpg, Predicted: 0, Actual: 0
Image: Northern_Renaissance/albrecht-durer_study-of-a-christ-on-the-mount-of-
olives.jpg, Predicted: 0, Actual: 0
Image: Northern_Renaissance/albrecht-durer_annunciation.jpg, Predicted: 0,
Actual: 0
Outlier detection accuracy by embeddings: 0.10
```

0.6 Statistical outlier detection based on mahalanobis distance

```
[]: import numpy as np
     # Compute mean and covariance matrix for embeddings
     mean_vec = np.mean(all_embeddings, axis=0)
     cov_matrix = np.cov(all_embeddings, rowvar=False)
     inv_cov_matrix = np.linalg.inv(cov_matrix)
     def mahalanobis_distance(x, mean, inv_cov):
         delta = x - mean
         return np.sqrt(np.dot(np.dot(delta, inv cov), delta.T))
     # Calculate distances
     distances = np.array([mahalanobis_distance(emb, mean_vec, inv_cov_matrix) for_u
      →emb in all_embeddings])
     # Set a threshold
     threshold_distance = np.percentile(distances, 95)
     mahalanobis_outliers = [all_image_paths[i] for i, d in enumerate(distances) if u
      →d > threshold_distance]
     outlier accuracy = 0
     for path in mahalanobis_outliers:
         outlier_accuracy += 1 if predictions[all_image_paths.index(path)] !=__
      →all_labels[all_image_paths.index(path)].argmax() else 0
         print(f"Outlier: {path} predicted as {predictions[all_image_paths.
      dindex(path)]}, actual {all_labels[all_image_paths.index(path)].argmax()}")
```

```
print(f"Outlier accuracy: {outlier_accuracy / len(mahalanobis_outliers):.2f}")
Outlier: Impressionism/claude-monet_the-undergrowth-in-the-forest-of-saint-
germain.jpg predicted as 4, actual 4
Outlier: Impressionism/claude-monet_the-rue-montargueil-with-flags.jpg predicted
as 4, actual 4
Outlier: Impressionism/claude-monet_storm-off-the-coast-of-belle-ile-1886.jpg
predicted as 4, actual 4
Outlier: Impressionism/claude-monet palazzo-dario-4.jpg predicted as 3, actual 4
Outlier: Impressionism/claude-monet_burgo-marina-at-bordighera.jpg predicted as
4, actual 4
Outlier: Impressionism/claude-monet_the-japanese-bridge-the-bridge-over-the-
water-lily-pond.jpg predicted as 4, actual 4
Outlier: Impressionism/claude-monet_water-lilies-19.jpg predicted as 4, actual 4
Outlier: Impressionism/claude-monet_madame-monet-and-child.jpg predicted as 4,
actual 4
Outlier: Impressionism/claude-monet_the-artist-s-house-view-from-the-rose-
garden-1924.jpg predicted as 4, actual 4
Outlier: Impressionism/claude-monet_stilll-life-with-anemones.jpg predicted as
17, actual 4
Outlier: Impressionism/claude-monet_at-cap-d-antibes-mistral-wind.jpg predicted
as 4, actual 4
Outlier: Impressionism/claude-monet_juan-les-pins.jpg predicted as 4, actual 4
Outlier: Impressionism/claude-monet_irises-2-1917.jpg predicted as 4, actual 4
Outlier: Impressionism/claude-monet_vase-of-peonies.jpg predicted as 4, actual 4
Outlier: Impressionism/claude-monet_water-lilies-1899.jpg predicted as 4, actual
Outlier: Impressionism/claude-monet_red-azaleas-in-a-pot.jpg predicted as 4,
actual 4
Outlier: Impressionism/claude-monet_lunch-under-the-canopy.jpg predicted as 22,
actual 4
Outlier: Impressionism/childe-hassam_against-the-light.jpg predicted as 5,
actual 3
Outlier: Impressionism/childe-hassam_the-gorge-appledore.jpg predicted as 13,
actual 3
Outlier: Impressionism/childe-hassam_july-fourteenth-rue-daunou.jpg predicted as
3, actual 3
Outlier: Post_Impressionism/vincent-van-gogh_wheat-field-with-
cornflowers-1890.jpg predicted as 22, actual 22
Outlier: Post_Impressionism/vincent-van-gogh_cypresses-1889(1).jpg predicted as
22, actual 22
Outlier: Realism/vincent-van-gogh_seated-nude-after-bargues-1890.jpg predicted
as 15, actual 22
Outlier: Post_Impressionism/vincent-van-gogh_pine-trees-with-figure-in-the-
garden-of-saint-paul-hospital-1889.jpg predicted as 22, actual 22
Outlier: Post_Impressionism/vincent-van-gogh_view-from-vincent-s-room-in-the-
```

```
rue-lepic-1887.jpg predicted as 2, actual 22
Outlier: Realism/vincent-van-gogh_dying-slave-and-figures-at-a-table-1887(1).jpg
predicted as 22, actual 22
Outlier: Post_Impressionism/vincent-van-gogh_bridges-across-the-seine-at-
asnieres-1887(1).jpg predicted as 22, actual 22
Outlier: Post_Impressionism/vincent-van-gogh_mulberry-tree-1889.jpg predicted as
22, actual 22
Outlier: Post_Impressionism/vincent-van-gogh_the-roubine-du-roi-canal-with-
washerwomen-1888.jpg predicted as 22, actual 22
Outlier: Post_Impressionism/vincent-van-gogh_landscape-in-the-rain-1890.jpg
predicted as 22, actual 22
Outlier: Post_Impressionism/vincent-van-gogh_mother-roulin-with-her-
baby-1888-1.jpg predicted as 15, actual 22
Outlier: Realism/vincent-van-gogh_austin-friars-church-london(1).jpg predicted
as 22, actual 22
Outlier: Post Impressionism/vincent-van-gogh_clumps-of-grass-1889(1).jpg
predicted as 22, actual 22
Outlier: Post Impressionism/vincent-van-gogh_trees-and-shrubs-1889-1.jpg
predicted as 22, actual 22
Outlier: Post Impressionism/vincent-van-gogh still-life-with-basket-and-six-
oranges-1888.jpg predicted as 22, actual 22
Outlier: Post_Impressionism/vincent-van-gogh_italian-woman-agostina-
segatori-1887.jpg predicted as 22, actual 22
Outlier: Post_Impressionism/vincent-van-gogh_vase-with-white-and-red-
carnations-1887.jpg predicted as 22, actual 22
Outlier: Post Impressionism/vincent-van-gogh a-pair-of-shoes-1887(1).jpg
predicted as 18, actual 22
Outlier: Post_Impressionism/vincent-van-gogh_still-life-vase-with-cornflowers-
and-poppies-1887.jpg predicted as 22, actual 22
Outlier: Post_Impressionism/vincent-van-gogh_the-banks-of-the-seine-with-
boats-1887.jpg predicted as 4, actual 22
Outlier: Post_Impressionism/vincent-van-gogh_a-woman-s-legs(1).jpg predicted as
22, actual 22
Outlier: Realism/vincent-van-gogh_peasant-with-walking-stick-and-little-sketch-
of-the-same-figure-1885.jpg predicted as 22, actual 22
Outlier: Post_Impressionism/vincent-van-gogh_self-portrait-with-a-grey-felt-
hat-1887.jpg predicted as 22, actual 22
Outlier: Post_Impressionism/vincent-van-gogh_couple-arm-in-arm-and-other-
figures-with-a-windmill-in-the-background-1890(1).jpg predicted as 22, actual 22
Outlier: Post_Impressionism/vincent-van-gogh_cypresses(1).jpg predicted as 22,
actual 22
Outlier: Post Impressionism/vincent-van-gogh_sheet-with-sketches-of-
peasants-1890.jpg predicted as 22, actual 22
Outlier: Realism/vincent-van-gogh_weaver-facing-right-interior-with-one-window-
and-high-chair-1884.jpg predicted as 22, actual 22
Outlier: Post_Impressionism/vincent-van-gogh_pieta-1889.jpg predicted as 22,
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Outlier: Impressionism/camille-pissarro_peasants-harvesting-potatoes-1882.jpg

actual 22

predicted as 2, actual 2 Outlier: Impressionism/camille-pissarro_harvesting-potatos.jpg predicted as 17, actual 2 Outlier: Impressionism/camille-pissarro_eugene-murer-at-his-pastry-oven-1877.jpg predicted as 17, actual 2 Outlier: Impressionism/camille-pissarro_peasants-gathering-grass-1883.jpg predicted as 2, actual 2 Outlier: Impressionism/camille-pissarro_poultry-market-pontoise-1892.jpg predicted as 2, actual 2 Outlier: Romanticism/gustave-dore_the-sultana-chegger-eddour-and-the-emir-saifeddin.jpg predicted as 22, actual 7 Outlier: Romanticism/gustave-dore_don-quixote-92.jpg predicted as 7, actual 7 Outlier: Romanticism/gustave-dore_the-lost-cow-1852.jpg predicted as 8, actual 7 Outlier: Art_Nouveau_Modern/raphael-kirchner_greek-girls-4.jpg predicted as 22, Outlier: Art_Nouveau_Modern/raphael-kirchner_erika.jpg predicted as 19, actual Outlier: Art Nouveau Modern/raphael-kirchner the-players-pastel-on-paper.jpg predicted as 21, actual 19 Outlier: Art_Nouveau_Modern/raphael-kirchner_temptation.jpg predicted as 19, Outlier: Art_Nouveau_Modern/raphael-kirchner_christmas-pictures-2.jpg predicted as 19, actual 19 Outlier: Art_Nouveau_Modern/raphael-kirchner_europe-s-princes.jpg predicted as 19, actual 19 Outlier: Art Nouveau Modern/raphael-kirchner_santoy-1900-1.jpg predicted as 19, actual 19 Outlier: Art_Nouveau_Modern/raphael-kirchner_christmas-pictures.jpg predicted as 19, actual 19 Outlier: Expressionism/salvador-dali_untitled-after-the-night-bymichelangelo.jpg predicted as 15, actual 21 Outlier: Naive_Art_Primitivism/salvador-dali_decalcomania.jpg predicted as 21, actual 21 Outlier: Expressionism/salvador-dali_scene-in-the-courtyard-of-the-escorialwith-a-figure-in-the-foreground-inspired-by-michelangelo.jpg predicted as 21, actual 21 Outlier: Post_Impressionism/salvador-dali_still-life-by-a-window.jpg predicted as 22, actual 21 Outlier: Symbolism/salvador-dali_iesus-super-mare-ambulansmatthew-14-26-1964.jpg predicted as 21, actual 21 Outlier: Realism/salvador-dali_mystical-carnation-1951.jpg predicted as 22, actual 21 Outlier: Post_Impressionism/salvador-dali_landscape-near-cadaques-1921.jpg predicted as 4, actual 21 Outlier: Realism/salvador-dali_portrait-of-mrs-fagen.jpg predicted as 14, actual

Outlier: Post_Impressionism/salvador-dali_portdogue-1919.jpg predicted as 14,

actual 21

Outlier: Post_Impressionism/salvador-dali_noon-barracks-of-port-lligat-1956.jpg predicted as 4, actual 21

Outlier: Naive Art Primitivism/marc-chagall paradise-1960-1.jpg predicted as 12, actual 12

Outlier: Naive Art Primitivism/marc-chagall miriam-sister-of-moses-dances-withher-friends-to-celebrate-the-deliverance-of-israel-exodus-xv.jpg predicted as 22, actual 12

Outlier: Naive_Art_Primitivism/marc-chagall_lilacs-1980.jpg predicted as 12, actual 12

Outlier: Naive_Art_Primitivism/marc-chagall_the-avenue-of-opera-1969.jpg predicted as 12, actual 12

Outlier: Naive Art Primitivism/marc-chagall moses-receiving-the-tablets-of-thelaw-from-god-on-mount-sinai-exodus-xxiv-15-18.jpg predicted as 0, actual 12 Outlier: Cubism/marc-chagall_self-portrait-with-muse-dream-1918.jpg predicted as 11, actual 12

Outlier: Naive_Art_Primitivism/marc-chagall_moses-receiving-the-tablets-oflaw-6.jpg predicted as 12, actual 12

Outlier: Naive_Art_Primitivism/marc-chagall_praying-1983.jpg predicted as 22, actual 12

Outlier: Naive Art Primitivism/marc-chagall study-to-vitrage-at-tudeley-allsaints-church-1975-1.jpg predicted as 12, actual 12

Outlier: Naive_Art_Primitivism/marc-chagall_king-david-1974-1.jpg predicted as 12, actual 12

Outlier: Naive_Art_Primitivism/marc-chagall_the-sacrifice-of-isaac-1966.jpg predicted as 18, actual 12

Outlier: Naive_Art_Primitivism/marc-chagall_vitrage-at-art-institute-ofchicago-1976-1.jpg predicted as 12, actual 12

Outlier: Naive_Art_Primitivism/marc-chagall_ceiling-of-paris-operahouse-1964.jpg predicted as 12, actual 12

Outlier: Naive_Art_Primitivism/marc-chagall_illustration-for-louis-aragon-swork-one-who-says-things-without-saying-anything-1976-22.jpg predicted as 12, actual 12

Outlier: Naive Art Primitivism/marc-chagall_drawing-by-marc-chagall-forvladimir-mayakovsky-s-70th-birthday-1963.jpg predicted as 12, actual 12 Outlier: Naive_Art_Primitivism/marc-chagall_spring-1938.jpg predicted as 12, actual 12

Outlier: Naive_Art_Primitivism/marc-chagall_gobelin-above-the-entrance-of-themuseum-message-biblique-marc-chagall-1971.jpg predicted as 12, actual 12

Outlier: Naive_Art_Primitivism/marc-chagall_ruth-at-the-feet-of-boaz-1960.jpg predicted as 12, actual 12

Outlier: Naive_Art_Primitivism/marc-chagall_study-to-striking-rock-2.jpg predicted as 12, actual 12

Outlier: Naive_Art_Primitivism/marc-chagall_the-creation-of-man-1.jpg predicted as 20, actual 12

Outlier: Naive_Art_Primitivism/marc-chagall_tree-of-jesse-1975.jpg predicted as 12, actual 12

Outlier: Naive_Art_Primitivism/marc-chagall_the-blue-face-1967.jpg predicted as 21, actual 12

Outlier: Naive_Art_Primitivism/marc-chagall_bushes-and-birds-sketch-to-vitrage-in-chapelle-des-cordeliers-in-sarrebourg-1976.jpg predicted as 13, actual 12 Outlier: Expressionism/marc-chagall_lisa-with-a-mandolin-1914.jpg predicted as 12, actual 12 Outlier: Naive_Art_Primitivism/marc-chagall_joseph-a-shepherd-1931.jpg predicted as 17, actual 12

Outlier: Naive_Art_Primitivism/marc-chagall_god-turns-moses-staff-into-a-serpent-1966.jpg predicted as 18, actual 12

Outlier: Naive_Art_Primitivism/marc-chagall_abraham-and-isaac-on-the-way-to-the-place-of-sacrifice.jpg predicted as 17, actual 12

Outlier: Naive_Art_Primitivism/marc-chagall_laid-table-with-view-of-saint-paul-de-vance-1968.jpg predicted as 18, actual 12

Outlier: Naive_Art_Primitivism/marc-chagall_consecration-of-aaron-and-hisson-1965.jpg predicted as 12, actual 12

Outlier: Naive_Art_Primitivism/marc-chagall_musicians-1979.jpg predicted as 12, actual 12

Outlier: Naive_Art_Primitivism/marc-chagall_vitrage-at-art-institute-of-chicago-1976.jpg predicted as 12, actual 12

Outlier: Naive_Art_Primitivism/marc-chagall_illustration-for-louis-aragon-s-work-one-who-says-things-without-saying-anything-1976-4.jpg predicted as 12, actual 12

Outlier: Naive_Art_Primitivism/marc-chagall_moses-called-the-elders-and-presents-tablets-of-law-1966.jpg predicted as 12, actual 12

Outlier: Naive_Art_Primitivism/marc-chagall_tree-of-life-sketch-to-vitrage-in-chapelle-des-cordeliers-in-sarrebourg-1974.jpg predicted as 13, actual 12

Outlier: Naive_Art_Primitivism/marc-chagall_multicolor-clown-1974.jpg predicted as 12, actual 12

Outlier: Expressionism/martiros-saryan_still-life-1961.jpg predicted as 14, actual 13

Outlier: Fauvism/martiros-saryan_fruits-1916.jpg predicted as 16, actual 13 Outlier: Expressionism/martiros-saryan_portrait-of-s-shervinsky-1939.jpg predicted as 13, actual 13

Outlier: Naive_Art_Primitivism/martiros-saryan_illustration-to-armenian-folk-tales-1937-3.jpg predicted as 14, actual 13

Outlier: Expressionism/martiros-saryan_portrait-1935.jpg predicted as 18, actual 13

Outlier: Expressionism/martiros-saryan_poet-1907.jpg predicted as 13, actual 13

Outlier: Expressionism/martiros-saryan_sketch-of-book-cover-martiros-

saryan-1935-1.jpg predicted as 22, actual 13

Outlier: Expressionism/martiros-saryan_a-street-constantinople-1910-2.jpg predicted as 18, actual 13

Outlier: Expressionism/martiros-saryan_picking-cotton-in-the-ararat-valley-1949.jpg predicted as 18, actual 13

Outlier: Expressionism/martiros-saryan_holiday-under-the-tree.jpg predicted as 14, actual 13

Outlier: Symbolism/martiros-saryan_armenia-1970.jpg predicted as 14, actual 13 Outlier: Realism/martiros-saryan_still-life-1959.jpg predicted as 18, actual 13 Outlier: Expressionism/martiros-saryan_aragats-1929.jpg predicted as 13, actual

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13
Outlier: Expressionism/martiros-saryan_willow-tree-and-herd-1925.jpg predicted
as 13, actual 13
Outlier: Symbolism/martiros-saryan_armenia-1923-1.jpg predicted as 13, actual 13
Outlier: Realism/martiros-saryan_cover-of-book-of-fairy-tales-by-hovhannes-
tumanyan-1930.jpg predicted as 13, actual 13
Outlier: Symbolism/martiros-saryan_king-with-daughter-1904.jpg predicted as 1,
actual 13
Outlier: Expressionism/martiros-saryan_worker-s-settlement-and-concrete-plant-
davalu-ararat-region-1937.jpg predicted as 13, actual 13
Outlier: Realism/john-singer-sargent pomegranates-1908-1.jpg predicted as 22,
Outlier: Realism/john-singer-sargent_muddy-alligators-1917.jpg predicted as 18,
actual 11
Outlier: Impressionism/john-singer-sargent_the-brook-1907.jpg predicted as 11,
actual 11
Outlier: Impressionism/john-singer-sargent_la-biancheria-1910.jpg predicted as
11, actual 11
Outlier: Realism/john-singer-sargent_a-mosque-cairo-1891.jpg predicted as 22,
actual 11
Outlier: Impressionism/john-singer-sargent_on-the-verandah-ironbound-island-
maine.jpg predicted as 3, actual 11
Outlier: Impressionism/john-singer-sargent_boy-on-a-rock.jpg predicted as 11,
actual 11
Outlier: Impressionism/john-singer-sargent_simplon-pass-reading-1911.jpg
predicted as 11, actual 11
Outlier: Impressionism/john-singer-sargent_palms-1917.jpg predicted as 18,
actual 11
Outlier: Impressionism/john-singer-sargent_bedouin-women-carrying-water-
jars-1891.jpg predicted as 15, actual 11
Outlier: Impressionism/john-singer-sargent_a-garden-in-corfu-1909.jpg predicted
as 3, actual 11
Outlier: Realism/john-singer-sargent_portrait-of-sir-max-michaelis-1925.jpg
predicted as 8, actual 11
Outlier: Impressionism/john-singer-sargent_dolce-far-niente.jpg predicted as 11,
actual 11
Outlier: Impressionism/john-singer-sargent_palmettos-1917.jpg predicted as 22,
actual 11
Outlier: Impressionism/john-singer-sargent_mountain-stream.jpg predicted as 11,
actual 11
Outlier: Impressionism/john-singer-sargent_the-lake-of-tiberias.jpg predicted as
11, actual 11
Outlier: Realism/john-singer-sargent_madame-errazuriz.jpg predicted as 22,
actual 11
Outlier: Symbolism/nicholas-roerich_sketch-for-tale-of-tsar-saltan-1919.jpg
predicted as 14, actual 14
Outlier: Symbolism/nicholas-roerich_study-of-clouds.jpg predicted as 4, actual
14
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Outlier: Symbolism/nicholas-roerich_pass.jpg predicted as 18, actual 14
Outlier: Art_Nouveau_Modern/nicholas-roerich_a-path-1908.jpg predicted as 22,
actual 14
Outlier: Realism/nicholas-roerich_hellas-1893.jpg predicted as 17, actual 14
Outlier: Realism/nicholas-roerich_pen-drawing-of-two-idols-in-his-letter-to-v-
stasov-1901.jpg predicted as 22, actual 14
Outlier: Symbolism/nicholas-roerich_monhigan-dreaminess-1922.jpg predicted as
14, actual 14
Outlier: Art_Nouveau_Modern/nicholas-roerich_maleine-s-room-1913-1.jpg predicted
as 14, actual 14
Outlier: Art Nouveau Modern/nicholas-roerich northern-landscape-with-
fortress.jpg predicted as 14, actual 14
Outlier: Symbolism/nicholas-roerich_terem-of-yaroslavna-1908.jpg predicted as
14, actual 14
Outlier: Art_Nouveau_Modern/nicholas-roerich_sign-1915.jpg predicted as 14,
Outlier: Symbolism/nicholas-roerich_karelian-study-1918-1.jpg predicted as 14,
actual 14
Outlier: Art_Nouveau_Modern/nicholas-roerich_kostroma-romanov-boyars-
tower-1903.jpg predicted as 14, actual 14
Outlier: Symbolism/nicholas-roerich_the-pact-of-culture-study-1931.jpg predicted
as 14, actual 14
Outlier: Symbolism/nicholas-roerich_tibetian-way-1931-1.jpg predicted as 14,
actual 14
Outlier: Art_Nouveau_Modern/nicholas-roerich_vignette-for-book-n-k-
roerich-1918-4.jpg predicted as 1, actual 14
Outlier: Symbolism/nicholas-roerich_stupa-near-sharugen-1928.jpg predicted as
14, actual 14
Outlier: Symbolism/nicholas-roerich_message-from-shambhala-arrow-letter-1946.jpg
predicted as 14, actual 14
Outlier: Realism/boris-kustodiev_portrait-of-a-peasant-kotov.jpg predicted as
19, actual 1
Outlier: Naive_Art_Primitivism/boris-kustodiev_easter-procession-1915-1.jpg
predicted as 1, actual 1
Outlier: Art Nouveau Modern/boris-kustodiev a-young-merchant-s-wife-in-the-a-
checkered-scarf-1919.jpg predicted as 2, actual 1
Outlier: Art_Nouveau_Modern/boris-kustodiev_under-honey-s-harmonica-1927.jpg
predicted as 1, actual 1
{\tt Outlier: Art\_Nouveau\_Modern/boris-kustodiev\_merchant-s-wife-on-the-like}
promenade-1920.jpg predicted as 1, actual 1
Outlier: Art_Nouveau_Modern/boris-kustodiev_street-of-a-provincial-town-1917.jpg
predicted as 13, actual 1
Outlier: Art_Nouveau_Modern/boris-kustodiev_bather-seated-on-the-shore-1926.jpg
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predicted as 13, actual 1

as 1, actual 1

actual 1

45

Outlier: Realism/boris-kustodiev_portrait-of-m-v-chaliapina-1919.jpg predicted

Outlier: Realism/boris-kustodiev_visit-to-general-1905.jpg predicted as 5,

```
Outlier: Art_Nouveau_Modern/boris-kustodiev_palm-market-with-spassky-
gate-1917.jpg predicted as 18, actual 1
Outlier: Realism/boris-kustodiev_portrait-of-konstantin-somov-1914.jpg predicted
as 1, actual 1
Outlier: Art_Nouveau_Modern/boris-kustodiev_bather-1922.jpg predicted as 1,
actual 1
Outlier: Realism/boris-kustodiev_mercahnt-s-wifes-on-the-volga-1917.jpg
predicted as 1, actual 1
Outlier: Post_Impressionism/paul-cezanne_mont-sainte-victoire-1902.jpg predicted
as 18, actual 16
Outlier: Romanticism/paul-cezanne_paul-alexis-reading-at-zola-s-house-1870.jpg
predicted as 11, actual 16
Outlier: Cubism/paul-cezanne_bathers-mont-sainte-victoire-in-the-background.jpg
predicted as 16, actual 16
Outlier: Romanticism/paul-cezanne_interior-with-two-women-and-a-child.jpg
predicted as 22, actual 16
Outlier: Impressionism/paul-cezanne_couple-in-a-garden.jpg predicted as 16,
actual 16
Outlier: Impressionism/pierre-auguste-renoir_roses-by-the-window.jpg predicted
as 17, actual 17
Outlier: Impressionism/pierre-auguste-renoir_bouquet-of-roses-1.jpg predicted as
17, actual 17
Outlier: Impressionism/pierre-auguste-renoir_landscape-10.jpg predicted as 17,
actual 17
Outlier: Impressionism/pierre-auguste-renoir_portrait-of-charles-and-georges-
durand-ruel-1882.jpg predicted as 17, actual 17
Outlier: Impressionism/pierre-auguste-renoir_party-in-the-country-at-
berneval-1898.jpg predicted as 17, actual 17
Outlier: Impressionism/pierre-auguste-renoir_rural-scene.jpg predicted as 17,
actual 17
Outlier: Impressionism/pierre-auguste-renoir_geraniums-and-cats-1881.jpg
predicted as 18, actual 17
Outlier: Impressionism/pierre-auguste-renoir_essoyes-landscape.jpg predicted as
17, actual 17
Outlier: Impressionism/pierre-auguste-renoir_still-life-with-fuscias.jpg
predicted as 16, actual 17
Outlier: Impressionism/pierre-auguste-renoir_ellen-andree-1879.jpg predicted as
17, actual 17
Outlier: Impressionism/pierre-auguste-renoir_the-artist-s-home.jpg predicted as
17, actual 17
Outlier: Impressionism/pierre-auguste-renoir_path-through-the-high-grass.jpg
predicted as 2, actual 17
Outlier: Impressionism/pierre-auguste-renoir_still-life-with-lemons-and-
oranges-1881.jpg predicted as 17, actual 17
Outlier: Impressionism/pierre-auguste-renoir_vase-of-roses-1.jpg predicted as
17, actual 17
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Outlier: Impressionism/pierre-auguste-renoir_children-on-the-beach-at-

guernsey.jpg predicted as 17, actual 17

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Outlier: Impressionism/pierre-auguste-renoir_clearing.jpg predicted as 17, actual 17
Outlier: Impressionism/pierre-auguste-renoir_young-girl-with-a-dog-1888.jpg
```

predicted as 17, actual 17

Outlier: Impressionism/pierre-auguste-renoir_madame-stora-in-algerian-dress-1870.jpg predicted as 17, actual 17

Outlier: Impressionism/pierre-auguste-renoir_portrait-of-madame-duberville-with-her-son-henri-1910.jpg predicted as 17, actual 17

Outlier: Impressionism/pierre-auguste-renoir_woman-after-bathing-1896.jpg predicted as 17, actual 17

Outlier: Impressionism/pierre-auguste-renoir_figures-on-the-beach.jpg predicted as 2, actual 17

Outlier: Impressionism/pierre-auguste-renoir_children-s-afternoon-at-wargemont-marguerite-1884.jpg predicted as 1, actual 17

Outlier: Impressionism/pierre-auguste-renoir_aline-charigot-with-a-dog-1880.jpg predicted as 17, actual 17

Outlier: Impressionism/pierre-auguste-renoir_woman-picking-flowers-1912.jpg predicted as 17, actual 17

Outlier: Impressionism/pierre-auguste-renoir_lane-in-the-woods-1900.jpg predicted as 17, actual 17

Outlier: Impressionism/pierre-auguste-renoir_mother-and-children.jpg predicted as 17, actual 17

Outlier: Impressionism/pierre-auguste-renoir_vase-of-flowers-1871.jpg predicted as 11, actual 17

Outlier: Impressionism/pierre-auguste-renoir_vase-of-flowers.jpg predicted as 17, actual 17

Outlier: Impressionism/pierre-auguste-renoir_mount-sainte-victoire-1889.jpg predicted as 17, actual 17

Outlier: Impressionism/pierre-auguste-renoir_roche-goyon-1885.jpg predicted as 17, actual 17

Outlier: Impressionism/pierre-auguste-renoir_cape-saint-jean-1910.jpg predicted as 17, actual 17

Outlier: Impressionism/pierre-auguste-renoir_path-through-the-

undergrowth-1910.jpg predicted as 17, actual 17

Outlier: Impressionism/pierre-auguste-renoir_modele-from-the-moulin-de-lagalette-1876.jpg predicted as 17, actual 17

Outlier: Impressionism/pierre-auguste-renoir_cliffs-on-the-coast-near-pourville-1879.jpg predicted as 17, actual 17

Outlier: Impressionism/pierre-auguste-renoir_roses.jpg predicted as 17, actual 17

Outlier: Impressionism/pierre-auguste-renoir_flowers-in-a-vase-1.jpg predicted as 17, actual 17

Outlier: Impressionism/pierre-auguste-renoir_landscape-with-a-view-of-the-sea.jpg predicted as 17, actual 17

Outlier: Impressionism/pierre-auguste-renoir_woman-in-a-hat-1895.jpg predicted as 17, actual 17

Outlier: Impressionism/pierre-auguste-renoir_ambroise-vollard-portrait.jpg predicted as 17, actual 17

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Outlier: Impressionism/pierre-auguste-renoir_portrait-of-georges-
riviere-1880.jpg predicted as 17, actual 17
Outlier: Impressionism/pierre-auguste-renoir_on-the-seine-near-argenteuil.jpg
predicted as 17, actual 17
Outlier: Impressionism/pierre-auguste-renoir_houses-by-the-sea-1912.jpg
predicted as 11, actual 17
Outlier: Impressionism/pierre-auguste-renoir mother-and-child-1881.jpg predicted
as 17, actual 17
Outlier: Baroque/rembrandt_jacob-s-dream.jpg predicted as 20, actual 20
Outlier: Baroque/rembrandt_a-study-of-a-female-nude-seen-from-the-back-1634.jpg
predicted as 0, actual 20
Outlier: Baroque/rembrandt_an-old-woman-sleeping-1635.jpg predicted as 20,
actual 20
Outlier: Realism/ivan-shishkin winter-moscow-suburbs.jpg predicted as 4, actual
Outlier: Realism/ivan-shishkin_pines-1895.jpg predicted as 10, actual 10
Outlier: Realism/ivan-shishkin_the-boy-in-the-field.jpg predicted as 10, actual
Outlier: Northern_Renaissance/albrecht-durer_jesus-christ-on-the-mount-of-
olives.jpg predicted as 0, actual 0
Outlier: Northern_Renaissance/albrecht-durer_st-jerome-in-his-study-1514.jpg
predicted as 0, actual 0
Outlier: Northern_Renaissance/albrecht-durer_peasans-at-the-market-1512.jpg
predicted as 0, actual 0
Outlier: Northern_Renaissance/albrecht-durer_house-by-a-pond.jpg predicted as
17, actual 0
Outlier: Northern Renaissance/albrecht-durer_penitent-jerome-1497.jpg predicted
as 0, actual 0
Outlier: Northern_Renaissance/albrecht-durer_the-austrian-saints-1517.jpg
predicted as 0, actual 0
Outlier: Northern_Renaissance/albrecht-durer_melancthon-1526.jpg predicted as 0,
Outlier: Northern Renaissance/albrecht-durer wappen-pirckheimer.jpg predicted as
11, actual 0
Outlier: Northern Renaissance/albrecht-durer the-sudarium-of-st-
veronica-1510.jpg predicted as 0, actual 0
Outlier: Northern_Renaissance/albrecht-durer_rear-view-of-the-female-1528.jpg
predicted as 0, actual 0
Outlier: Northern_Renaissance/albrecht-durer_title-page-to-the-edition-
of-1498-1498.jpg predicted as 0, actual 0
Outlier: Northern_Renaissance/albrecht-durer_four-angels-staying-the-winds-and-
signing-the-chosen-1498.jpg predicted as 0, actual 0
Outlier: Northern_Renaissance/albrecht-durer_the-temptation-of-the-
idler-1498.jpg predicted as 0, actual 0
Outlier: Northern_Renaissance/albrecht-durer_the-piece-of-turf-with-the-
columbine.jpg predicted as 10, actual 0
Outlier: Northern_Renaissance/albrecht-durer_sixtus-tucher-in-open-grave.jpg
predicted as 0, actual 0
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Outlier: Northern_Renaissance/albrecht-durer_monstrous-hog-of-landser-1496.jpg
predicted as 0, actual 0
Outlier: Northern_Renaissance/albrecht-durer_man-of-sorrows-with-hands-
bound-1512.jpg predicted as 12, actual 0
Outlier: Impressionism/ilya-repin follow-me-satan-temptation-of-jesus-
christ-1903.jpg predicted as 4, actual 8
Outlier: Realism/ilya-repin storm-on-the-volga-1891.jpg predicted as 18, actual
Outlier: Realism/ilya-repin_hopak-1927.jpg predicted as 11, actual 8
Outlier: Realism/ilya-repin_cossacks-on-the-black-sea-1908.jpg predicted as 3,
actual 8
Outlier: Impressionism/edgar-degas_the-bath-1.jpg predicted as 17, actual 5
Outlier: Impressionism/edgar-degas_after-the-bath-8.jpg predicted as 22, actual
Outlier: Impressionism/edgar-degas_dancer-with-a-bouquet-of-flowers-the-star-of-
the-ballet.jpg predicted as 5, actual 5
Outlier: Impressionism/edgar-degas_dancer-with-bouquet.jpg predicted as 5,
Outlier: Impressionism/edgar-degas_madame-deitz-monin-1879.jpg predicted as 17,
actual 5
Outlier: Impressionism/edgar-degas_the-bath-1890.jpg predicted as 18, actual 5
Outlier: Impressionism/edgar-degas_three-dancers-in-purple-skirts.jpg predicted
as 5, actual 5
Outlier: Impressionism/edgar-degas_a-woman-seated-beside-a-vase-of-
flowers-1865.jpg predicted as 2, actual 5
Outlier: Fauvism/pyotr-konchalovsky portrait-of-daughter-1912.jpg predicted as
18, actual 18
Outlier: Post_Impressionism/pyotr-konchalovsky_palm-trees-and-geranium-1908.jpg
predicted as 18, actual 18
Outlier: Post_Impressionism/pyotr-konchalovsky_rocks-in-sorrento-1924.jpg
predicted as 18, actual 18
Outlier: Realism/pyotr-konchalovsky_autumn-bouquet-1919.jpg predicted as 18,
actual 18
Outlier: Impressionism/pyotr-konchalovsky_belkino-garden-1907.jpg predicted as
18, actual 18
Outlier: Post_Impressionism/pyotr-konchalovsky_portrait-of-pianist-vladimir-
sofronitsky-at-the-piano-1932.jpg predicted as 18, actual 18
Outlier: Post_Impressionism/pyotr-konchalovsky_the-model-sitting-on-their-
haunches-in-fig-for-the-film-the-model-squatting-1919.jpg predicted as 18,
actual 18
Outlier: Realism/pyotr-konchalovsky_still-life-with-cabbage-1937.jpg predicted
as 17, actual 18
Outlier: Post_Impressionism/pyotr-konchalovsky_guitarist-a-sketch-1913.jpg
predicted as 18, actual 18
Outlier: Realism/pyotr-konchalovsky_in-the-cathedral-of-yuryev-abbot-
bessarion-1926.jpg predicted as 18, actual 18
Outlier: Post_Impressionism/pyotr-konchalovsky_seashore-italy-1924.jpg predicted
```

as 18, actual 18

Outlier: Realism/pyotr-konchalovsky_alder-against-the-sun-1932.jpg predicted as 17, actual 18

Outlier: Realism/pyotr-konchalovsky_birches-in-the-snow-1936.jpg predicted as 18, actual 18

Outlier: Realism/pyotr-konchalovsky_still-life-lilacs-1951.jpg predicted as 14, actual 18

Outlier: Cubism/pyotr-konchalovsky_abramtsevo-the-boys-at-the-river-drawing-for-the-painting-boys-bathing-1920.jpg predicted as 18, actual 18

Outlier: Realism/pyotr-konchalovsky_haystack-1947.jpg predicted as 18, actual 18

Outlier: Expressionism/pyotr-konchalovsky_school-of-yungs-came-the-

first-1929.jpg predicted as 18, actual 18

Outlier: Impressionism/pyotr-konchalovsky_portrait-of-the-artist-s-wife-olga-konchalovskaya-under-the-umbrella-in-the-garden-1904.jpg predicted as 22, actual 18

Outlier: Expressionism/pyotr-konchalovsky_bullfight-1910.jpg predicted as 18, actual 18

Outlier: Post_Impressionism/pyotr-konchalovsky_gardener-1908.jpg predicted as 22, actual 18

Outlier: Expressionism/pablo-picasso_head-of-a-woman-with-green-curls-1946.jpg predicted as 13, actual 15

Outlier: Pointillism/pablo-picasso_the-happy-family.jpg predicted as 2, actual 15

Outlier: Post_Impressionism/pablo-picasso_still-life-the-dessert-1901.jpg predicted as 15, actual 15

Outlier: Post_Impressionism/pablo-picasso_woman-with-blue-hat-1901.jpg predicted as 5, actual 15

Outlier: Symbolism/pablo-picasso_harlequin-s-death-1906.jpg predicted as 15, actual 15

Outlier: Analytical_Cubism/pablo-picasso_jug-and-fruit-dish-1908.jpg predicted as 15, actual 15

Outlier: Naive_Art_Primitivism/pablo-picasso_female-nude-with-her-arms-raised.jpg predicted as 15, actual 15

Outlier: Symbolism/pablo-picasso_standing-young-nude-1904.jpg predicted as 15, actual 15

Outlier accuracy: 0.36

The Kernel crashed while executing code in the current cell or a previous cell.

Click here for more info.

View Jupyter log for further details.