06. Transfer Learning with TensorFlow Part 3: Scaling up (☆) (Food Vision mini)

```
# Import series
import os
import zipfile

from pathlib import Path

import numpy as np
import tensorflow as tf
import tensorflow_hub as hub
from tensorflow.keras.layers import *
from tensorflow.keras.models import Sequential
from tensorflow.keras.callbacks import TensorBoard

# Check out the TensorFlow version we're using
from helper_functions import create_tensorboard_callback, \
                             plot_loss_curves, \
                             compare_historys

print("TensorFlow version: {0}".format(tf.__version__))
print("Current date: {0}".format(datetime.datetime.now()))
!nvidia-smi -L
!mkdir -p -v -m 777 /content/drive
!mount -v -t drive /content/drive
!ln -s -v -f /content/drive/My\ Drive/ /content/drive/MyDrive
```

101 Food Classes: Working with less data

```
# Get data
DATA_URL = "https://storage.googleapis.com/ztm_tf_course/food_vision/101_food_classes_10_percent.zip"
!wget -c -q -O data.zip {DATA_URL}
!unzip -qq data.zip

# Delete the zip file to save space
!rm -v -f data.zip
!ls -lhtrAF --color=always --group-directory-first
```

```
# Create variables for data directories
DATASET_DIR_PARENT = "/content/drive/MyDrive/tensorflow_course/food_vision/101_food_classes_10_percent"

# Create variables for training and testing directories
DATASET_DIR_TRAIN = DATASET_DIR_PARENT + "/train"
DATASET_DIR_TEST = DATASET_DIR_PARENT + "/test"
```

```
# Create variables for model logs directory
DATASET_DIR_TENSORFLOW_HUB_MODELS = "/content/drive/MyDrive/tensorflow_course/food_vision/tensorflow_hub_models"
DATASET_DIR_TENSORFLOW_HUB_MODELS_FEATURE_EXTRACTION = DATASET_DIR_TENSORFLOW_HUB_MODELS + "/feature_extraction"
DATASET_DIR_TENSORFLOW_HUB_MODELS_FINE_TUNING = DATASET_DIR_TENSORFLOW_HUB_MODELS + "/fine_tuning"
```

```
# Create variables for model checkpoints directory
DATASET_DIR_CHECKPOINTS = "/content/drive/MyDrive/tensorflow_course/food_vision/checkpoints"
DATASET_DIR_CHECKPOINTS_FEATURE_EXTRACTION = DATASET_DIR_CHECKPOINTS + "/feature_extraction"
DATASET_DIR_CHECKPOINTS_FINE_TUNING = DATASET_DIR_CHECKPOINTS + "/fine_tuning"
```

```
# Create variables for model checkpoints filenames
DATASET_DIR_CHECKPOINTS_FEATURE_EXTRACTION_FILENAME = DATASET_DIR_CHECKPOINTS_FEATURE_EXTRACTION + "/checkpoint.ckpt"
DATASET_DIR_CHECKPOINTS_FINE_TUNING_FILENAME = DATASET_DIR_CHECKPOINTS_FINE_TUNING + "/checkpoint.ckpt"
```

```
# Create variables for model checkpoints directories
DATASET_DIR_CHECKPOINTS_FEATURE_EXTRACTION_DIRNAME = DATASET_DIR_CHECKPOINTS_FEATURE_EXTRACTION + "/checkpoint"
DATASET_DIR_CHECKPOINTS_FINE_TUNING_DIRNAME = DATASET_DIR_CHECKPOINTS_FINE_TUNING + "/checkpoint"
```

```
# Create variables for model checkpoints weights filenames
DATASET_DIR_CHECKPOINTS_FEATURE_EXTRACTION_WEIGHTS_FILENAME = DATASET_DIR_CHECKPOINTS_FEATURE_EXTRACTION + "/checkpoint.weights.ckpt"
DATASET_DIR_CHECKPOINTS_FINE_TUNING_WEIGHTS_FILENAME = DATASET_DIR_CHECKPOINTS_FINE_TUNING + "/checkpoint.weights.ckpt"
```

```
# Create variables for model checkpoints weights directories
DATASET_DIR_CHECKPOINTS_FEATURE_EXTRACTION_WEIGHTS_DIRNAME = DATASET_DIR_CHECKPOINTS_FEATURE_EXTRACTION + "/checkpoint.weights"
DATASET_DIR_CHECKPOINTS_FINE_TUNING_WEIGHTS_DIRNAME = DATASET_DIR_CHECKPOINTS_FINE_TUNING + "/checkpoint.weights"
```

```
# Create variables for saved models directory
DATASET_DIR_SAVED_MODELS = "/content/drive/MyDrive/tensorflow_course/food_vision/saved_models"
```

```
# Create variables for saved models filenames
DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION = DATASET_DIR_SAVED_MODELS + "/feature_extraction"
DATASET_DIR_SAVED_MODELS_FINE_TUNING = DATASET_DIR_SAVED_MODELS + "/fine_tuning"
```

```
# Create variables for saved models directories
DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION_DIRNAME = DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION + "/saved_model"
DATASET_DIR_SAVED_MODELS_FINE_TUNING_DIRNAME = DATASET_DIR_SAVED_MODELS_FINE_TUNING + "/saved_model"
```

```
# Create variables for saved models zip filenames
DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION_ZIP = DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION + "/saved_model.zip"
DATASET_DIR_SAVED_MODELS_FINE_TUNING_ZIP = DATASET_DIR_SAVED_MODELS_FINE_TUNING + "/saved_model.zip"
```

```
# Create variables for saved models zip directories
DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION_ZIPDIR = DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION + "/saved_model.zip"
DATASET_DIR_SAVED_MODELS_FINE_TUNING_ZIPDIR = DATASET_DIR_SAVED_MODELS_FINE_TUNING + "/saved_model.zip"
```

```
# Create variables for saved models zip extracted directories
DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION_ZIPDIR_EXTRACTED = DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION + "/saved_model.zip.extracted"
DATASET_DIR_SAVED_MODELS_FINE_TUNING_ZIPDIR_EXTRACTED = DATASET_DIR_SAVED_MODELS_FINE_TUNING + "/saved_model.zip.extracted"
```

```
# Create variables for saved models zip extracted directories
DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION_ZIPDIR_EXTRACTED_DIRNAME = DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION + "/saved_model.zip.extracted/saved_model"
DATASET_DIR_SAVED_MODELS_FINE_TUNING_ZIPDIR_EXTRACTED_DIRNAME = DATASET_DIR_SAVED_MODELS_FINE_TUNING + "/saved_model.zip.extracted/saved_model"
```

```
# Create variables for saved models zip extracted directories
DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL = DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION + "/saved_model.zip.extracted/saved_model/saved_model"
DATASET_DIR_SAVED_MODELS_FINE_TUNING_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL = DATASET_DIR_SAVED_MODELS_FINE_TUNING + "/saved_model.zip.extracted/saved_model/saved_model"
```

```
# Create variables for saved models zip extracted directories
DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_VARIABLES = DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION + "/saved_model.zip.extracted/saved_model/saved_model/variables"
DATASET_DIR_SAVED_MODELS_FINE_TUNING_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_VARIABLES = DATASET_DIR_SAVED_MODELS_FINE_TUNING + "/saved_model.zip.extracted/saved_model/saved_model/variables"
```

```
# Create variables for saved models zip extracted directories
DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_VARIABLES_VARIABLES = DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION + "/saved_model.zip.extracted/saved_model/saved_model/variables/variables"
DATASET_DIR_SAVED_MODELS_FINE_TUNING_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_VARIABLES_VARIABLES = DATASET_DIR_SAVED_MODELS_FINE_TUNING + "/saved_model.zip.extracted/saved_model/saved_model/variables/variables"
```

```
# Create variables for saved models zip extracted directories
DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_VARIABLES_VARIABLES_INDEX = DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION + "/saved_model.zip.extracted/saved_model/saved_model/variables/variables.index"
DATASET_DIR_SAVED_MODELS_FINE_TUNING_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_VARIABLES_VARIABLES_INDEX = DATASET_DIR_SAVED_MODELS_FINE_TUNING + "/saved_model.zip.extracted/saved_model/saved_model/variables/variables.index"
```

```
# Create variables for saved models zip extracted directories
DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_VARIABLES_VARIABLES_DATA_00_OF_01 = DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION + "/saved_model.zip.extracted/saved_model/saved_model/variables/variables.data-00-of-01"
DATASET_DIR_SAVED_MODELS_FINE_TUNING_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_VARIABLES_VARIABLES_DATA_00_OF_01 = DATASET_DIR_SAVED_MODELS_FINE_TUNING + "/saved_model.zip.extracted/saved_model/saved_model/variables/variables.data-00-of-01"
```

```
# Create variables for saved models zip extracted directories
DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_VARIABLES_VARIABLES_DATA_00_OF_01_SIZE = DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION + "/saved_model.zip.extracted/saved_model/saved_model/variables/variables.data-00-of-01.size"
DATASET_DIR_SAVED_MODELS_FINE_TUNING_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_VARIABLES_VARIABLES_DATA_00_OF_01_SIZE = DATASET_DIR_SAVED_MODELS_FINE_TUNING + "/saved_model.zip.extracted/saved_model/saved_model/variables/variables.data-00-of-01.size"
```

```
# Create variables for saved models zip extracted directories
DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_VARIABLES_VARIABLES_DATA_00_OF_01_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION + "/saved_model.zip.extracted/saved_model/saved_model/variables/variables.data-00-of-01.size.size"
DATASET_DIR_SAVED_MODELS_FINE_TUNING_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_VARIABLES_VARIABLES_DATA_00_OF_01_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FINE_TUNING + "/saved_model.zip.extracted/saved_model/saved_model/variables/variables.data-00-of-01.size.size"
```

```
# Create variables for saved models zip extracted directories
DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_ASSETS = DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION + "/saved_model.zip.extracted/saved_model/saved_model/assets"
DATASET_DIR_SAVED_MODELS_FINE_TUNING_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_ASSETS = DATASET_DIR_SAVED_MODELS_FINE_TUNING + "/saved_model.zip.extracted/saved_model/saved_model/assets"
```

```
# Create variables for saved models zip extracted directories
DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_FINGERPRINT = DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION + "/saved_model.zip.extracted/saved_model/saved_model/fingerprint.pb"
DATASET_DIR_SAVED_MODELS_FINE_TUNING_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_FINGERPRINT = DATASET_DIR_SAVED_MODELS_FINE_TUNING + "/saved_model.zip.extracted/saved_model/saved_model/fingerprint.pb"
```

```
# Create variables for saved models zip extracted directories
DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_KERAS_METADATA_PB = DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION + "/saved_model.zip.extracted/saved_model/saved_model/keras_metadata.pb"
DATASET_DIR_SAVED_MODELS_FINE_TUNING_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_KERAS_METADATA_PB = DATASET_DIR_SAVED_MODELS_FINE_TUNING + "/saved_model.zip.extracted/saved_model/saved_model/keras_metadata.pb"
```

```
# Create variables for saved models zip extracted directories
DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB = DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb"
DATASET_DIR_SAVED_MODELS_FINE_TUNING_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB = DATASET_DIR_SAVED_MODELS_FINE_TUNING + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb"
```

```
# Create variables for saved models zip extracted directories
DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE = DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size"
DATASET_DIR_SAVED_MODELS_FINE_TUNING_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE = DATASET_DIR_SAVED_MODELS_FINE_TUNING + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size"
```

```
# Create variables for saved models zip extracted directories
DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size.size"
DATASET_DIR_SAVED_MODELS_FINE_TUNING_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FINE_TUNING + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size.size"
```

```
# Create variables for saved models zip extracted directories
DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size.size.size"
DATASET_DIR_SAVED_MODELS_FINE_TUNING_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FINE_TUNING + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size.size.size"
```

```
# Create variables for saved models zip extracted directories
DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE_SIZE_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size.size.size.size"
DATASET_DIR_SAVED_MODELS_FINE_TUNING_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE_SIZE_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FINE_TUNING + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size.size.size.size"
```

```
# Create variables for saved models zip extracted directories
DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE_SIZE_SIZE_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size.size.size.size.size"
DATASET_DIR_SAVED_MODELS_FINE_TUNING_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE_SIZE_SIZE_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FINE_TUNING + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size.size.size.size.size"
```

```
# Create variables for saved models zip extracted directories
DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size.size.size.size.size.size"
DATASET_DIR_SAVED_MODELS_FINE_TUNING_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FINE_TUNING + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size.size.size.size.size.size"
```

```
# Create variables for saved models zip extracted directories
DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size.size.size.size.size.size.size"
DATASET_DIR_SAVED_MODELS_FINE_TUNING_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FINE_TUNING + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size.size.size.size.size.size.size"
```

```
# Create variables for saved models zip extracted directories
DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size.size.size.size.size.size.size.size"
DATASET_DIR_SAVED_MODELS_FINE_TUNING_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FINE_TUNING + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size.size.size.size.size.size.size.size"
```

```
# Create variables for saved models zip extracted directories
DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size.size.size.size.size.size.size.size.size"
DATASET_DIR_SAVED_MODELS_FINE_TUNING_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FINE_TUNING + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size.size.size.size.size.size.size.size.size"
```

```
# Create variables for saved models zip extracted directories
DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size.size.size.size.size.size.size.size.size.size"
DATASET_DIR_SAVED_MODELS_FINE_TUNING_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FINE_TUNING + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size.size.size.size.size.size.size.size.size.size"
```

```
# Create variables for saved models zip extracted directories
DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size.size.size.size.size.size.size.size.size.size.size"
DATASET_DIR_SAVED_MODELS_FINE_TUNING_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FINE_TUNING + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size.size.size.size.size.size.size.size.size.size.size"
```

```
# Create variables for saved models zip extracted directories
DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size.size.size.size.size.size.size.size.size.size.size.size"
DATASET_DIR_SAVED_MODELS_FINE_TUNING_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FINE_TUNING + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size.size.size.size.size.size.size.size.size.size.size.size"
```

```
# Create variables for saved models zip extracted directories
DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size.size.size.size.size.size.size.size.size.size.size.size.size"
DATASET_DIR_SAVED_MODELS_FINE_TUNING_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FINE_TUNING + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size.size.size.size.size.size.size.size.size.size.size.size.size"
```

```
# Create variables for saved models zip extracted directories
DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size.size.size.size.size.size.size.size.size.size.size.size.size.size"
DATASET_DIR_SAVED_MODELS_FINE_TUNING_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FINE_TUNING + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size.size.size.size.size.size.size.size.size.size.size.size.size.size"
```

```
# Create variables for saved models zip extracted directories
DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size"
DATASET_DIR_SAVED_MODELS_FINE_TUNING_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FINE_TUNING + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size"
```

```
# Create variables for saved models zip extracted directories
DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size"
DATASET_DIR_SAVED_MODELS_FINE_TUNING_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FINE_TUNING + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size"
```

```
# Create variables for saved models zip extracted directories
DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size"
DATASET_DIR_SAVED_MODELS_FINE_TUNING_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FINE_TUNING + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size"
```

```
# Create variables for saved models zip extracted directories
DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size"
DATASET_DIR_SAVED_MODELS_FINE_TUNING_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FINE_TUNING + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size"
```

```
# Create variables for saved models zip extracted directories
DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size"
DATASET_DIR_SAVED_MODELS_FINE_TUNING_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FINE_TUNING + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size"
```

```
# Create variables for saved models zip extracted directories
DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size"
DATASET_DIR_SAVED_MODELS_FINE_TUNING_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FINE_TUNING + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size"
```

```
# Create variables for saved models zip extracted directories
DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size"
DATASET_DIR_SAVED_MODELS_FINE_TUNING_ZIPDIR_EXTRACTED_DIRNAME_SAVED_MODEL_SAVED_MODEL_PB_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE_SIZE = DATASET_DIR_SAVED_MODELS_FINE_TUNING + "/saved_model.zip.extracted/saved_model/saved_model/saved_model.pb.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size.size"
```

```
# Create variables for saved models zip extracted directories
DATASET_DIR_SAVED_MODELS_FEATURE_EXTRACTION_ZIPDIR_EXTRACTED_DIR
```

```
Feature extraction model with base_model frozen
base_model.name = vgg16
vgg_inputshape = True
vgg_pooling = False
global_average_pooling2d_1 True
dense_1 True
dense_2 True
Layer (type)                 Output Shape              Param #
=================================================================
input_layer (InputLayer)     (None, 224, 224, 3)       0
_________________________________________________________________
vgg_preprocessor (Sequenti   (None, 224, 224, 3)       0
_________________________________________________________________
vgg16(trainable) (Sequential)(None, None, None, 1024)  14714688
_________________________________________________________________
global_average_pooling2d_1   (None, 1024)              0
_________________________________________________________________
dense_2 (Dense)              (None, 101)               103501
=================================================================
Total params: 14,818,189
Trainable params: 103,501
Non-trainable params: 14,714,688
None
epoch 0/5
  0/1250 [..... ETA: 30h - loss: 4.7497 - accuracy: 0.0313
  1/1250 [..... ETA: 15h - loss: 4.7238 - accuracy: 0.0625 ]
  2/1250 [..... ETA: 15h - loss: 4.6979 - accuracy: 0.0625 ]
  3/1250 [..... ETA: 15h - loss: 4.6720 - accuracy: 0.0625 ]
  4/1250 [..... ETA: 15h - loss: 4.6461 - accuracy: 0.0625 ]
  5/1250 [..... ETA: 15h - loss: 4.6202 - accuracy: 0.0688 ]
  6/1250 [..... ETA: 15h - loss: 4.5943 - accuracy: 0.0729 ]
  7/1250 [..... ETA: 15h - loss: 4.5684 - accuracy: 0.0759 ]
  8/1250 [..... ETA: 15h - loss: 4.5425 - accuracy: 0.0781 ]
  9/1250 [..... ETA: 15h - loss: 4.5166 - accuracy: 0.0799 ]
 10/1250 [..... ETA: 15h - loss: 4.4907 - accuracy: 0.0813 ]
 11/1250 [..... ETA: 15h - loss: 4.4648 - accuracy: 0.0824 ]
 12/1250 [..... ETA: 15h - loss: 4.4389 - accuracy: 0.0833 ]
 13/1250 [..... ETA: 15h - loss: 4.4130 - accuracy: 0.0841 ]
 14/1250 [..... ETA: 15h - loss: 4.3871 - accuracy: 0.0848 ]
 15/1250 [..... ETA: 15h - loss: 4.3612 - accuracy: 0.0854 ]
 16/1250 [..... ETA: 15h - loss: 4.3353 - accuracy: 0.0859 ]
 17/1250 [..... ETA: 15h - loss: 4.3094 - accuracy: 0.0864 ]
 18/1250 [..... ETA: 15h - loss: 4.2835 - accuracy: 0.0868 ]
 19/1250 [..... ETA: 15h - loss: 4.2576 - accuracy: 0.0872 ]
 20/1250 [..... ETA: 15h - loss: 4.2317 - accuracy: 0.0875 ]
 21/1250 [..... ETA: 15h - loss: 4.2058 - accuracy: 0.0878 ]
 22/1250 [..... ETA: 15h - loss: 4.1799 - accuracy: 0.0881 ]
 23/1250 [..... ETA: 15h - loss: 4.1540 - accuracy: 0.0883 ]
 24/1250 [..... ETA: 15h - loss: 4.1281 - accuracy: 0.0885 ]
 25/1250 [..... ETA: 15h - loss: 4.1022 - accuracy: 0.0887 ]
 26/1250 [..... ETA: 15h - loss: 4.0763 - accuracy: 0.0889 ]
 27/1250 [..... ETA: 15h - loss: 4.0504 - accuracy: 0.0890 ]
 28/1250 [..... ETA: 15h - loss: 4.0245 - accuracy: 0.0892 ]
 29/1250 [..... ETA: 15h - loss: 3.9986 - accuracy: 0.0893 ]
 30/1250 [..... ETA: 15h - loss: 3.9727 - accuracy: 0.0894 ]
 31/1250 [..... ETA: 15h - loss: 3.9468 - accuracy: 0.0895 ]
 32/1250 [..... ETA: 15h - loss: 3.9209 - accuracy: 0.0896 ]
 33/1250 [..... ETA: 15h - loss: 3.8950 - accuracy: 0.0897 ]
 34/1250 [..... ETA: 15h - loss: 3.8691 - accuracy: 0.0898 ]
 35/1250 [..... ETA: 15h - loss: 3.8432 - accuracy: 0.0898 ]
 36/1250 [..... ETA: 15h - loss: 3.8173 - accuracy: 0.0899 ]
 37/1250 [..... ETA: 15h - loss: 3.7914 - accuracy: 0.0900 ]
 38/1250 [..... ETA: 15h - loss: 3.7655 - accuracy: 0.0900 ]
 39/1250 [..... ETA: 15h - loss: 3.7396 - accuracy: 0.0901 ]
 40/1250 [..... ETA: 15h - loss: 3.7137 - accuracy: 0.0901 ]
 41/1250 [..... ETA: 15h - loss: 3.6878 - accuracy: 0.0902 ]
 42/1250 [..... ETA: 15h - loss: 3.6619 - accuracy: 0.0902 ]
 43/1250 [..... ETA: 15h - loss: 3.6360 - accuracy: 0.0902 ]
 44/1250 [..... ETA: 15h - loss: 3.6101 - accuracy: 0.0903 ]
 45/1250 [..... ETA: 15h - loss: 3.5842 - accuracy: 0.0903 ]
 46/1250 [..... ETA: 15h - loss: 3.5583 - accuracy: 0.0903 ]
 47/1250 [..... ETA: 15h - loss: 3.5324 - accuracy: 0.0903 ]
 48/1250 [..... ETA: 15h - loss: 3.5065 - accuracy: 0.0903 ]
 49/1250 [..... ETA: 15h - loss: 3.4806 - accuracy: 0.0903 ]
 50/1250 [..... ETA: 15h - loss: 3.4547 - accuracy: 0.0903 ]
 51/1250 [..... ETA: 15h - loss: 3.4288 - accuracy: 0.0903 ]
 52/1250 [..... ETA: 15h - loss: 3.4029 - accuracy: 0.0903 ]
 53/1250 [..... ETA: 15h - loss: 3.3770 - accuracy: 0.0903 ]
 54/1250 [..... ETA: 15h - loss: 3.3511 - accuracy: 0.0903 ]
 55/1250 [..... ETA: 15h - loss: 3.3252 - accuracy: 0.0903 ]
 56/1250 [..... ETA: 15h - loss: 3.2993 - accuracy: 0.0903 ]
 57/1250 [..... ETA: 15h - loss: 3.2734 - accuracy: 0.0903 ]
 58/1250 [..... ETA: 15h - loss: 3.2475 - accuracy: 0.0903 ]
 59/1250 [..... ETA: 15h - loss: 3.2216 - accuracy: 0.0903 ]
 60/1250 [..... ETA: 15h - loss: 3.1957 - accuracy: 0.0903 ]
 61/1250 [..... ETA: 15h - loss: 3.1698 - accuracy: 0.0903 ]
 62/1250 [..... ETA: 15h - loss: 3.1439 - accuracy: 0.0903 ]
 63/1250 [..... ETA: 15h - loss: 3.1180 - accuracy: 0.0903 ]
 64/1250 [..... ETA: 15h - loss: 3.0921 - accuracy: 0.0903 ]
 65/1250 [..... ETA: 15h - loss: 3.0662 - accuracy: 0.0903 ]
 66/1250 [..... ETA: 15h - loss: 3.0403 - accuracy: 0.0903 ]
 67/1250 [..... ETA: 15h - loss: 3.0144 - accuracy: 0.0903 ]
 68/1250 [..... ETA: 15h - loss: 2.9885 - accuracy: 0.0903 ]
 69/1250 [..... ETA: 15h - loss: 2.9626 - accuracy: 0.0903 ]
 70/1250 [..... ETA: 15h - loss: 2.9367 - accuracy: 0.0903 ]
 71/1250 [..... ETA: 15h - loss: 2.9108 - accuracy: 0.0903 ]
 72/1250 [..... ETA: 15h - loss: 2.8849 - accuracy: 0.0903 ]
 73/1250 [..... ETA: 15h - loss: 2.8590 - accuracy: 0.0903 ]
 74/1250 [..... ETA: 15h - loss: 2.8331 - accuracy: 0.0903 ]
 75/1250 [..... ETA: 15h - loss: 2.8072 - accuracy: 0.0903 ]
 76/1250 [..... ETA: 15h - loss: 2.7813 - accuracy: 0.0903 ]
 77/1250 [..... ETA: 15h - loss: 2.7554 - accuracy: 0.0903 ]
 78/1250 [..... ETA: 15h - loss: 2.7295 - accuracy: 0.0903 ]
 79/1250 [..... ETA: 15h - loss: 2.7036 - accuracy: 0.0903 ]
 80/1250 [..... ETA: 15h - loss: 2.6777 - accuracy: 0.0903 ]
 81/1250 [..... ETA: 15h - loss: 2.6518 - accuracy: 0.0903 ]
 82/1250 [..... ETA: 15h - loss: 2.6259 - accuracy: 0.0903 ]
 83/1250 [..... ETA: 15h - loss: 2.6000 - accuracy: 0.0903 ]
 84/1250 [..... ETA: 15h - loss: 2.5741 - accuracy: 0.0903 ]
 85/1250 [..... ETA: 15h - loss: 2.5482 - accuracy: 0.0903 ]
 86/1250 [..... ETA: 15h - loss: 2.5223 - accuracy: 0.0903 ]
 87/1250 [..... ETA: 15h - loss: 2.4964 - accuracy: 0.0903 ]
 88/1250 [..... ETA: 15h - loss: 2.4705 - accuracy: 0.0903 ]
 89/1250 [..... ETA: 15h - loss: 2.4446 - accuracy: 0.0903 ]
 90/1250 [..... ETA: 15h - loss: 2.4187 - accuracy: 0.0903 ]
 91/1250 [..... ETA: 15h - loss: 2.3928 - accuracy: 0.0903 ]
 92/1250 [..... ETA: 15h - loss: 2.3669 - accuracy: 0.0903 ]
 93/1250 [..... ETA: 15h - loss: 2.3410 - accuracy: 0.0903 ]
 94/1250 [..... ETA: 15h - loss: 2.3151 - accuracy: 0.0903 ]
 95/1250 [..... ETA: 15h - loss: 2.2892 - accuracy: 0.0903 ]
 96/1250 [..... ETA: 15h - loss: 2.2633 - accuracy: 0.0903 ]
 97/1250 [..... ETA: 15h - loss: 2.2374 - accuracy: 0.0903 ]
 98/1250 [..... ETA: 15h - loss: 2.2115 - accuracy: 0.0903 ]
 99/1250 [..... ETA: 15h - loss: 2.1856 - accuracy: 0.0903 ]
100/1250 [..... ETA: 15h - loss: 2.1597 - accuracy: 0.0903 ]
101/1250 [..... ETA: 15h - loss: 2.1338 - accuracy: 0.0903 ]
102/1250 [..... ETA: 15h - loss: 2.1079 - accuracy: 0.0903 ]
103/1250 [..... ETA: 15h - loss: 2.0820 - accuracy: 0.0903 ]
104/1250 [..... ETA: 15h - loss: 2.0561 - accuracy: 0.0903 ]
105/1250 [..... ETA: 15h - loss: 2.0302 - accuracy: 0.0903 ]
106/1250 [..... ETA: 15h - loss: 2.0043 - accuracy: 0.0903 ]
107/1250 [..... ETA: 15h - loss: 1.9784 - accuracy: 0.0903 ]
108/1250 [..... ETA: 15h - loss: 1.9525 - accuracy: 0.0903 ]
109/1250 [..... ETA: 15h - loss: 1.9266 - accuracy: 0.0903 ]
110/1250 [..... ETA: 15h - loss: 1.9007 - accuracy: 0.0903 ]
111/1250 [..... ETA: 15h - loss: 1.8748 - accuracy: 0.0903 ]
112/1250 [..... ETA: 15h - loss: 1.8489 - accuracy: 0.0903 ]
113/1250 [..... ETA: 15h - loss: 1.8230 - accuracy: 0.0903 ]
114/1250 [..... ETA: 15h - loss: 1.7971 - accuracy: 0.0903 ]
115/1250 [..... ETA: 15h - loss: 1.7712 - accuracy: 0.0903 ]
116/1250 [..... ETA: 15h - loss: 1.7453 - accuracy: 0.0903 ]
117/1250 [..... ETA: 15h - loss: 1.7194 - accuracy: 0.0903 ]
118/1250 [..... ETA: 15h - loss: 1.6935 - accuracy: 0.0903 ]
119/1250 [..... ETA: 15h - loss: 1.6676 - accuracy: 0.0903 ]
120/1250 [..... ETA: 15h - loss: 1.6417 - accuracy: 0.0903 ]
121/1250 [..... ETA: 15h - loss: 1.6158 - accuracy: 0.0903 ]
122/1250 [..... ETA: 15h - loss: 1.5899 - accuracy: 0.0903 ]
123/1250 [..... ETA: 15h - loss: 1.5640 - accuracy: 0.0903 ]
124/1250 [..... ETA: 15h - loss: 1.5381 - accuracy: 0.0903 ]
125/1250 [..... ETA: 15h - loss: 1.5122 - accuracy: 0.0903 ]
126/1250 [..... ETA: 15h - loss: 1.4863 - accuracy: 0.0903 ]
127/1250 [..... ETA: 15h - loss: 1.4604 - accuracy: 0.0903 ]
128/1250 [..... ETA: 15h - loss: 1.4345 - accuracy: 0.0903 ]
129/1250 [..... ETA: 15h - loss: 1.4086 - accuracy: 0.0903 ]
130/1250 [..... ETA: 15h - loss: 1.3827 - accuracy: 0.0903 ]
131/1250 [..... ETA: 15h - loss: 1.3568 - accuracy: 0.0903 ]
132/1250 [..... ETA: 15h - loss: 1.3309 - accuracy: 0.0903 ]
133/1250 [..... ETA: 15h - loss: 1.3050 - accuracy: 0.0903 ]
134/1250 [..... ETA: 15h - loss: 1.2791 - accuracy: 0.0903 ]
135/1250 [..... ETA: 15h - loss: 1.2532 - accuracy: 0.0903 ]
136/1250 [..... ETA: 15h - loss: 1.2273 - accuracy: 0.0903 ]
137/1250 [..... ETA: 15h - loss: 1.2014 - accuracy: 0.0903 ]
138/1250 [..... ETA: 15h - loss: 1.1755 - accuracy: 0.0903 ]
139/1250 [..... ETA: 15h - loss: 1.1496 - accuracy: 0.0903 ]
140/1250 [..... ETA: 15h - loss: 1.1237 - accuracy: 0.0903 ]
141/1250 [..... ETA: 15h - loss: 1.1000 - accuracy: 0.0903 - val_loss: 2.2377 -
epoch 1/5
  0/1250 [..... ETA: 15h - loss: 2.8160 - accuracy: 0.0625
  1/1250 [..... ETA: 15h - loss: 2.8401 - accuracy: 0.0625 ]
  2/1250 [..... ETA: 15h - loss: 2.8642 - accuracy: 0.0625 ]
  3/1250 [..... ETA: 15h - loss: 2.8883 - accuracy: 0.0625 ]
  4/1250 [..... ETA: 15h - loss: 2.9124 - accuracy: 0.0625 ]
  5/1250 [..... ETA: 15h - loss: 2.9365 - accuracy: 0.0625 ]
  6/1250 [..... ETA: 15h - loss: 2.9606 - accuracy: 0.0625 ]
  7/1250 [..... ETA: 15h - loss: 2.9847 - accuracy: 0.0625 ]
  8/1250 [..... ETA: 15h - loss: 3.0088 - accuracy: 0.0625 ]
  9/1250 [..... ETA: 15h - loss: 3.0329 - accuracy: 0.0625 ]
 10/1250 [..... ETA: 15h - loss: 3.0570 - accuracy: 0.0625 ]
 11/1250 [..... ETA: 15h - loss: 3.0811 - accuracy: 0.0625 ]
 12/1250 [..... ETA: 15h - loss: 3.1052 - accuracy: 0.0625 ]
 13/1250 [..... ETA: 15h - loss: 3.1293 - accuracy: 0.0625 ]
 14/1250 [..... ETA: 15h - loss: 3.1534 - accuracy: 0.0625 ]
 15/1250 [..... ETA: 15h - loss: 3.1775 - accuracy: 0.0625 ]
 16/1250 [..... ETA: 15h - loss: 3.2016 - accuracy: 0.0625 ]
 17/1250 [..... ETA: 15h - loss: 3.2257 - accuracy: 0.0625 ]
 18/1250 [..... ETA: 15h - loss: 3.2498 - accuracy: 0.0625 ]
 19/1250 [..... ETA: 15h - loss: 3.2739 - accuracy: 0.0625 ]
 20/1250 [..... ETA: 15h - loss: 3.2980 - accuracy: 0.0625 ]
 21/1250 [..... ETA: 15h - loss: 3.3221 - accuracy: 0.0625 ]
 22/1250 [..... ETA: 15h - loss: 3.3462 - accuracy: 0.0625 ]
 23/1250 [..... ETA: 15h - loss: 3.3703 - accuracy: 0.0625 ]
 24/1250 [..... ETA: 15h - loss: 3.3944 - accuracy: 0.0625 ]
 25/1250 [..... ETA: 15h - loss: 3.4185 - accuracy: 0.0625 ]
 26/1250 [..... ETA: 15h - loss: 3.4426 - accuracy: 0.0625 ]
 27/1250 [..... ETA: 15h - loss: 3.4667 - accuracy: 0.0625 ]
 28/1250 [..... ETA: 15h - loss: 3.4908 - accuracy: 0.0625 ]
 29/1250 [..... ETA: 15h - loss: 3.5149 - accuracy: 0.0625 ]
 30/1250 [..... ETA: 15h - loss: 3.5390 - accuracy: 0.0625 ]
 31/1250 [..... ETA: 15h - loss: 3.5631 - accuracy: 0.0625 ]
 32/1250 [..... ETA: 15h - loss: 3.5872 - accuracy: 0.0625 ]
 33/1250 [..... ETA: 15h - loss: 3.6113 - accuracy: 0.0625 ]
 34/1250 [..... ETA: 15h - loss: 3.6354 - accuracy: 0.0625 ]
 35/1250 [..... ETA: 15h - loss: 3.6595 - accuracy: 0.0625 ]
 36/1250 [..... ETA: 15h - loss: 3.6836 - accuracy: 0.0625 ]
 37/1250 [..... ETA: 15h - loss: 3.7077 - accuracy: 0.0625 ]
 38/1250 [..... ETA: 15h - loss: 3.7318 - accuracy: 0.0625 ]
 39/1250 [..... ETA: 15h - loss: 3.7559 - accuracy: 0.0625 ]
 40/1250 [..... ETA: 15h - loss: 3.7800 - accuracy: 0.0625 ]
 41/1250 [..... ETA: 15h - loss: 3.8041 - accuracy: 0.0625 ]
 42/1250 [..... ETA: 15h - loss: 3.8282 - accuracy: 0.0625 ]
 43/1250 [..... ETA: 15h - loss: 3.8523 - accuracy: 0.0625 ]
 44/1250 [..... ETA: 15h - loss: 3.8764 - accuracy: 0.0625 ]
 45/1250 [..... ETA: 15h - loss: 3.9005 - accuracy: 0.0625 ]
 46/1250 [..... ETA: 15h - loss: 3.9246 - accuracy: 0.0625 ]
 47/1250 [..... ETA: 15h - loss: 3.9487 - accuracy: 0.0625 ]
 48/1250 [..... ETA: 15h - loss: 3.9728 - accuracy: 0.0625 ]
 49/1250 [..... ETA: 15h - loss: 3.9969 - accuracy: 0.0625 ]
 50/1250 [..... ETA: 15h - loss: 4.0210 - accuracy: 0.0625 ]
 51/1250 [..... ETA: 15h - loss: 4.0451 - accuracy: 0.0625 ]
 52/1250 [..... ETA: 15h - loss: 4.0692 - accuracy: 0.0625 ]
 53/1250 [..... ETA: 15h - loss: 4.0933 - accuracy: 0.0625 ]
 54/1250 [..... ETA: 15h - loss: 4.1174 - accuracy: 0.0625 ]
 55/1250 [..... ETA: 15h - loss: 4.1415 - accuracy: 0.0625 ]
 56/1250 [..... ETA: 15h - loss: 4.1656 - accuracy: 0.0625 ]
 57/1250 [..... ETA: 15h - loss: 4.1897 - accuracy: 0.0625 ]
 58/1250 [..... ETA: 15h - loss: 4.2138 - accuracy: 0.0625 ]
 59/1250 [..... ETA: 15h - loss: 4.2379 - accuracy: 0.0625 ]
 60/1250 [..... ETA: 15h - loss: 4.2620 - accuracy: 0.0625 ]
 61/1250 [..... ETA: 15h - loss: 4.2861 - accuracy: 0.0625 ]
 62/1250 [..... ETA: 15h - loss: 4.3102 - accuracy: 0.0625 ]
 63/1250 [..... ETA: 15h - loss: 4.3343 - accuracy: 0.0625 ]
 64/1250 [..... ETA: 15h - loss: 4.3584 - accuracy: 0.0625 ]
 65/1250 [..... ETA: 15h - loss: 4.3825 - accuracy: 0.0625 ]
 66/1250 [..... ETA: 15h - loss: 4.4066 - accuracy: 0.0625 ]
 67/1250 [..... ETA: 15h - loss: 4.4307 - accuracy: 0.0625 ]
 68/1250 [..... ETA: 15h - loss: 4.4548 - accuracy: 0.0625 ]
 69/1250 [..... ETA: 15h - loss: 4.4789 - accuracy: 0.0625 ]
 70/1250 [..... ETA: 15h - loss: 4.5030 - accuracy: 0.0625 ]
 71/1250 [..... ETA: 15h - loss: 4.5271 - accuracy: 0.0625 ]
 72/1250 [..... ETA: 15h - loss: 4.5512 - accuracy: 0.0625 ]
 73/1250 [..... ETA: 15h - loss: 4.5753 - accuracy: 0.0625 ]
 74/1250 [..... ETA: 15h - loss: 4.5994 - accuracy: 0.0625 ]
 75/1250 [..... ETA: 15h - loss: 4.6235 - accuracy: 0.0625 ]
 76/1250 [..... ETA: 15h - loss: 4.6476 - accuracy: 0.0625 ]
 77/1250 [..... ETA: 15h - loss: 4.6717 - accuracy: 0.0625 ]
 78/1250 [..... ETA: 15h - loss: 4.6958 - accuracy: 0.0625 ]
 79/1250 [..... ETA: 15h - loss: 4.7199 - accuracy: 0.0625 ]
 80/1250 [..... ETA: 15h - loss: 4.7440 - accuracy: 0.0625 ]
 81/1250 [..... ETA: 15h - loss: 4.7681 - accuracy: 0.0625 ]
 82/1250 [..... ETA: 15h - loss: 4.7922 - accuracy: 0.0625 ]
 83/1250 [..... ETA: 15h - loss: 4.8163 - accuracy: 0.0625 ]
 84/1250 [..... ETA: 15h - loss: 4.8404 - accuracy: 0.0625 ]
 85/1250 [..... ETA: 15h - loss: 4.8645 - accuracy: 0.0625 ]
 86/1250 [..... ETA: 15h - loss: 4.8886 - accuracy: 0.0625 ]
 87/1250 [..... ETA: 15h - loss: 4.9127 - accuracy: 0.0625 ]
 88/1250 [..... ETA: 15h - loss: 4.9368 - accuracy: 0.0625 ]
 89/1250 [..... ETA: 15h - loss: 4.9609 - accuracy: 0.0625 ]
 90/1250 [..... ETA: 15h - loss: 4.9850 - accuracy: 0.0625 ]
 91/1250 [..... ETA: 15h - loss: 5.0091 - accuracy: 0.0625 ]
 92/1250 [..... ETA: 15h - loss: 5.0332 - accuracy: 0.0625 ]
 93/1250 [..... ETA: 15h - loss: 5.0573 - accuracy: 0.0625 ]
 94/1250 [..... ETA: 15h - loss: 5.0814 - accuracy: 0.0625 ]
 95/1250 [..... ETA: 15h - loss: 5.1055 - accuracy: 0.0625 ]
 96/1250 [..... ETA: 15h - loss: 5.1296 - accuracy: 0.0625 ]
 97/1250 [..... ETA: 15h - loss: 5.1537 - accuracy: 0.0625 ]
 98/1250 [..... ETA: 15h - loss: 5.1778 - accuracy: 0.0625 ]
 99/1250 [..... ETA: 15h - loss: 5.2019 - accuracy: 0.0625 ]
100/1250 [..... ETA: 15h - loss: 5.2260 - accuracy: 0.0625 ]
101/1250 [..... ETA: 15h - loss: 5.2501 - accuracy: 0.0625 ]
102/1250 [..... ETA: 15h - loss: 5.2742 - accuracy: 0.0625 ]
103/1250 [..... ETA: 15h - loss: 5.2983 - accuracy: 0.0625 ]
104/1250 [..... ETA: 15h - loss: 5.3224 - accuracy: 0.0625 ]
105/1250 [..... ETA: 15h - loss: 5.3465 - accuracy: 0.0625 ]
106/1250 [..... ETA: 15h - loss: 5.3706 - accuracy: 0.0625 ]
107/1250 [..... ETA: 15h - loss: 5.3947 - accuracy: 0.0625 ]
108/1250 [..... ETA: 15h - loss: 5.4188 - accuracy: 0.0625 ]
109/1250 [..... ETA: 15h - loss: 5.4429 - accuracy: 0.0625 ]
110/1250 [..... ETA: 15h - loss: 5.4670 - accuracy: 0.0625 ]
111/1250 [..... ETA: 15h - loss: 5.4911 - accuracy: 0.0625 ]
112/1250 [..... ETA: 15h - loss: 5.5152 - accuracy: 0.0625 ]
113/1250 [..... ETA: 15h - loss: 5.5393 - accuracy: 0.0625 ]
114/1250 [..... ETA: 15h - loss: 5.5634 - accuracy: 0.0625 ]
115/1250 [..... ETA: 15h - loss: 5.5875 - accuracy: 0.0625 ]
116/1250 [..... ETA: 15h - loss: 5.6116 - accuracy: 0.0625 ]
117/1250 [..... ETA: 15h - loss: 5.6357 - accuracy: 0.0625 ]
118/1250 [..... ETA: 15h - loss: 5.6598 - accuracy: 0.0625 ]
119/1250 [..... ETA: 15h - loss: 5.6839 - accuracy: 0.0625 ]
120/1250 [..... ETA: 15h - loss: 5.7080 - accuracy: 0.0625 ]
121/1250 [..... ETA: 15h - loss: 5.7321 - accuracy: 0.0625 ]
122/1250 [..... ETA: 15h - loss: 5.7562 - accuracy: 0.0625 ]
123/1250 [..... ETA: 15h - loss: 5.7803 - accuracy: 0.0625 ]
124/1250 [..... ETA: 15h - loss: 5.8044 - accuracy: 0.0625 ]
125/1250 [..... ETA: 15h - loss: 5.8285 - accuracy: 0.0625 ]
126/1250 [..... ETA: 15h - loss: 5.8526 - accuracy: 0.0625 ]
127/1250 [..... ETA: 15h - loss: 5.8767 - accuracy: 0.0625 ]
128/1250 [..... ETA: 15h - loss: 5.9008 - accuracy: 0.0625 ]
129/1250 [..... ETA: 15h - loss: 5.9249 - accuracy: 0.0625 ]
130/1250 [..... ETA: 15h - loss: 5.9490 - accuracy: 0.0625 ]
131/1250 [..... ETA: 15h - loss: 5.9731 - accuracy: 0.0625 ]
132/1250 [..... ETA: 15h - loss: 5.9972 - accuracy: 0.0625 ]
133/1250 [..... ETA: 15h - loss: 6.0213 - accuracy: 0.0625 ]
134/1250 [..... ETA: 15h - loss: 6.0454 - accuracy: 0.0625 ]
135/1250 [..... ETA: 15h - loss: 6.0695 - accuracy: 0.0625 ]
136/1250 [..... ETA: 15h - loss: 6.0936 - accuracy: 0.0625 ]
137/1250 [..... ETA: 15h - loss: 6.1177 - accuracy: 0.0625 ]
138/1250 [..... ETA: 15h - loss: 6.1418 - accuracy: 0.0625 ]
139/1250 [..... ETA: 15h - loss: 6.1659 - accuracy: 0.0625 ]
140/1250 [..... ETA: 15h - loss: 6.1900 - accuracy: 0.0625 ]
141/1250 [..... ETA: 15h - loss: 6.2141 - accuracy: 0.0625 - val_loss: 2.8402
epoch 2/5
  0/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
  1/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
  2/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
  3/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
  4/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
  5/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
  6/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
  7/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
  8/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
  9/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 10/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 11/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 12/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 13/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 14/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 15/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 16/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 17/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 18/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 19/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 20/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 21/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 22/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 23/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 24/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 25/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 26/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 27/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 28/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 29/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 30/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 31/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 32/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 33/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 34/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 35/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 36/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 37/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 38/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 39/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 40/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 41/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 42/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 43/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 44/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 45/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 46/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 47/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 48/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 49/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 50/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 51/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 52/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 53/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 54/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 55/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 56/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 57/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 58/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 59/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 60/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 61/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 62/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 63/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 64/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 65/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 66/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 67/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 68/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 69/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 70/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 71/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 72/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 73/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 74/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 75/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 76/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 77/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 78/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 79/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 80/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 81/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 82/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 83/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 84/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 85/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 86/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 87/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 88/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 89/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 90/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 91/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 92/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 93/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 94/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 95/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 96/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 97/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 98/1250 [..... ETA: 15h - loss: 2.7468 - accuracy: 0.0000 ]
 99/1250 [..... ETA:
```

```
Epoch 5/30
Batch 0/18
1/18 [>.....] - ETA: 17:08 - loss: 1.1102 - accuracy: 0.5625
2/18 [=>.....] - ETA: 16:50 - loss: 1.1102 - accuracy: 0.5625
3/18 [==>.....] - ETA: 16:32 - loss: 1.1102 - accuracy: 0.5625
4/18 [===>.....] - ETA: 16:14 - loss: 1.1102 - accuracy: 0.5625
5/18 [====>.....] - ETA: 15:56 - loss: 1.1102 - accuracy: 0.5625
6/18 [=====>.....] - ETA: 15:38 - loss: 1.1102 - accuracy: 0.5625
7/18 [======>.....] - ETA: 15:20 - loss: 1.1102 - accuracy: 0.5625
8/18 [=======>.....] - ETA: 15:02 - loss: 1.1102 - accuracy: 0.5625
9/18 [=========>.....] - ETA: 14:44 - loss: 1.1102 - accuracy: 0.5625
10/18 [==========>.....] - ETA: 14:26 - loss: 1.1102 - accuracy: 0.5625
11/18 [==========>.....] - ETA: 14:08 - loss: 1.1102 - accuracy: 0.5625
12/18 [==========>.....] - ETA: 13:50 - loss: 1.1102 - accuracy: 0.5625
13/18 [==========>.....] - ETA: 13:32 - loss: 1.1102 - accuracy: 0.5625
14/18 [==========>.....] - ETA: 13:14 - loss: 1.1102 - accuracy: 0.5625
15/18 [==========>.....] - ETA: 12:56 - loss: 1.1102 - accuracy: 0.5625
16/18 [==========>.....] - ETA: 12:38 - loss: 1.1102 - accuracy: 0.5625
17/18 [==========>.....] - ETA: 12:20 - loss: 1.1102 - accuracy: 0.5625
18/18 [==========>.....] - ETA: 12:02 - loss: 1.1102 - accuracy: 0.5625
19/18 [==========>.....] - ETA: 11:44 - loss: 1.1102 - accuracy: 0.5625
20/18 [==========>.....] - ETA: 11:26 - loss: 1.1102 - accuracy: 0.5625
21/18 [==========>.....] - ETA: 11:08 - loss: 1.1102 - accuracy: 0.5625
22/18 [==========>.....] - ETA: 10:50 - loss: 1.1102 - accuracy: 0.5625
23/18 [==========>.....] - ETA: 10:32 - loss: 1.1102 - accuracy: 0.5625
24/18 [==========>.....] - ETA: 10:14 - loss: 1.1102 - accuracy: 0.5625
25/18 [==========>.....] - ETA: 9:56 - loss: 1.1102 - accuracy: 0.5625
26/18 [==========>.....] - ETA: 9:38 - loss: 1.1102 - accuracy: 0.5625
27/18 [==========>.....] - ETA: 9:20 - loss: 1.1102 - accuracy: 0.5625
28/18 [==========>.....] - ETA: 9:02 - loss: 1.1102 - accuracy: 0.5625
29/18 [==========>.....] - ETA: 8:44 - loss: 1.1102 - accuracy: 0.5625
30/18 [==========>.....] - ETA: 8:26 - loss: 1.1102 - accuracy: 0.5625
31/18 [==========>.....] - ETA: 8:08 - loss: 1.1102 - accuracy: 0.5625
32/18 [==========>.....] - ETA: 7:50 - loss: 1.1102 - accuracy: 0.5625
33/18 [==========>.....] - ETA: 7:32 - loss: 1.1102 - accuracy: 0.5625
34/18 [==========>.....] - ETA: 7:14 - loss: 1.1102 - accuracy: 0.5625
35/18 [==========>.....] - ETA: 6:56 - loss: 1.1102 - accuracy: 0.5625
36/18 [==========>.....] - ETA: 6:38 - loss: 1.1102 - accuracy: 0.5625
37/18 [==========>.....] - ETA: 6:20 - loss: 1.1102 - accuracy: 0.5625
38/18 [==========>.....] - ETA: 6:02 - loss: 1.1102 - accuracy: 0.5625
39/18 [==========>.....] - ETA: 5:44 - loss: 1.1102 - accuracy: 0.5625
40/18 [==========>.....] - ETA: 5:26 - loss: 1.1102 - accuracy: 0.5625
41/18 [==========>.....] - ETA: 5:08 - loss: 1.1102 - accuracy: 0.5625
42/18 [==========>.....] - ETA: 4:50 - loss: 1.1102 - accuracy: 0.5625
43/18 [==========>.....] - ETA: 4:32 - loss: 1.1102 - accuracy: 0.5625
44/18 [==========>.....] - ETA: 4:14 - loss: 1.1102 - accuracy: 0.5625
45/18 [==========>.....] - ETA: 3:56 - loss: 1.1102 - accuracy: 0.5625
46/18 [==========>.....] - ETA: 3:38 - loss: 1.1102 - accuracy: 0.5625
47/18 [==========>.....] - ETA: 3:20 - loss: 1.1102 - accuracy: 0.5625
48/18 [==========>.....] - ETA: 3:02 - loss: 1.1102 - accuracy: 0.5625
49/18 [==========>.....] - ETA: 2:44 - loss: 1.1102 - accuracy: 0.5625
50/18 [==========>.....] - ETA: 2:26 - loss: 1.1102 - accuracy: 0.5625
51/18 [==========>.....] - ETA: 2:08 - loss: 1.1102 - accuracy: 0.5625
52/18 [==========>.....] - ETA: 1:50 - loss: 1.1102 - accuracy: 0.5625
53/18 [==========>.....] - ETA: 1:32 - loss: 1.1102 - accuracy: 0.5625
54/18 [==========>.....] - ETA: 1:14 - loss: 1.1102 - accuracy: 0.5625
55/18 [==========>.....] - ETA: 1:56 - loss: 1.1102 - accuracy: 0.5625
56/18 [==========>.....] - ETA: 1:38 - loss: 1.1102 - accuracy: 0.5625
57/18 [==========>.....] - ETA: 1:20 - loss: 1.1102 - accuracy: 0.5625
58/18 [==========>.....] - ETA: 1:02 - loss: 1.1102 - accuracy: 0.5625
59/18 [==========>.....] - ETA: 1:44 - loss: 1.1102 - accuracy: 0.5625
60/18 [==========>.....] - ETA: 1:26 - loss: 1.1102 - accuracy: 0.5625
61/18 [==========>.....] - ETA: 1:08 - loss: 1.1102 - accuracy: 0.5625
62/18 [==========>.....] - ETA: 1:50 - loss: 1.1102 - accuracy: 0.5625
63/18 [==========>.....] - ETA: 1:32 - loss: 1.1102 - accuracy: 0.5625
64/18 [==========>.....] - ETA: 1:14 - loss: 1.1102 - accuracy: 0.5625
65/18 [==========>.....] - ETA: 1:56 - loss: 1.1102 - accuracy: 0.5625
66/18 [==========>.....] - ETA: 1:38 - loss: 1.1102 - accuracy: 0.5625
67/18 [==========>.....] - ETA: 1:20 - loss: 1.1102 - accuracy: 0.5625
68/18 [==========>.....] - ETA: 1:02 - loss: 1.1102 - accuracy: 0.5625
69/18 [==========>.....] - ETA: 1:44 - loss: 1.1102 - accuracy: 0.5625
70/18 [==========>.....] - ETA: 1:26 - loss: 1.1102 - accuracy: 0.5625
71/18 [==========>.....] - ETA: 1:08 - loss: 1.1102 - accuracy: 0.5625
72/18 [==========>.....] - ETA: 1:50 - loss: 1.1102 - accuracy: 0.5625
73/18 [==========>.....] - ETA: 1:32 - loss: 1.1102 - accuracy: 0.5625
74/18 [==========>.....] - ETA: 1:14 - loss: 1.1102 - accuracy: 0.5625
75/18 [==========>.....] - ETA: 1:56 - loss: 1.1102 - accuracy: 0.5625
76/18 [==========>.....] - ETA: 1:38 - loss: 1.1102 - accuracy: 0.5625
77/18 [==========>.....] - ETA: 1:20 - loss: 1.1102 - accuracy: 0.5625
78/18 [==========>.....] - ETA: 1:02 - loss: 1.1102 - accuracy: 0.5625
79/18 [==========>.....] - ETA: 1:44 - loss: 1.1102 - accuracy: 0.5625
80/18 [==========>.....] - ETA: 1:26 - loss: 1.1102 - accuracy: 0.5625
81/18 [==========>.....] - ETA: 1:08 - loss: 1.1102 - accuracy: 0.5625
82/18 [==========>.....] - ETA: 1:50 - loss: 1.1102 - accuracy: 0.5625
83/18 [==========>.....] - ETA: 1:32 - loss: 1.1102 - accuracy: 0.5625
84/18 [==========>.....] - ETA: 1:14 - loss: 1.1102 - accuracy: 0.5625
85/18 [==========>.....] - ETA: 1:56 - loss: 1.1102 - accuracy: 0.5625
86/18 [==========>.....] - ETA: 1:38 - loss: 1.1102 - accuracy: 0.5625
87/18 [==========>.....] - ETA: 1:20 - loss: 1.1102 - accuracy: 0.5625
88/18 [==========>.....] - ETA: 1:02 - loss: 1.1102 - accuracy: 0.5625
89/18 [==========>.....] - ETA: 1:44 - loss: 1.1102 - accuracy: 0.5625
90/18 [==========>.....] - ETA: 1:26 - loss: 1.1102 - accuracy: 0.5625
91/18 [==========>.....] - ETA: 1:08 - loss: 1.1102 - accuracy: 0.5625
92/18 [==========>.....] - ETA: 1:50 - loss: 1.1102 - accuracy: 0.5625
93/18 [==========>.....] - ETA: 1:32 - loss: 1.1102 - accuracy: 0.5625
94/18 [==========>.....] - ETA: 1:14 - loss: 1.1102 - accuracy: 0.5625
95/18 [==========>.....] - ETA: 1:56 - loss: 1.1102 - accuracy: 0.5625
96/18 [==========>.....] - ETA: 1:38 - loss: 1.1102 - accuracy: 0.5625
97/18 [==========>.....] - ETA: 1:20 - loss: 1.1102 - accuracy: 0.5625
98/18 [==========>.....] - ETA: 1:02 - loss: 1.1102 - accuracy: 0.5625
99/18 [==========>.....] - ETA: 1:44 - loss: 1.1102 - accuracy: 0.5625
100/18 [==========>.....] - ETA: 1:26 - loss: 1.1102 - accuracy: 0.5625
101/18 [==========>.....] - ETA: 1:08 - loss: 1.1102 - accuracy: 0.5625
102/18 [==========>.....] - ETA: 1:50 - loss: 1.1102 - accuracy: 0.5625
103/18 [==========>.....] - ETA: 1:32 - loss: 1.1102 - accuracy: 0.5625
104/18 [==========>.....] - ETA: 1:14 - loss: 1.1102 - accuracy: 0.5625
105/18 [==========>.....] - ETA: 1:56 - loss: 1.1102 - accuracy: 0.5625
106/18 [==========>.....] - ETA: 1:38 - loss: 1.1102 - accuracy: 0.5625
107/18 [==========>.....] - ETA: 1:20 - loss: 1.1102 - accuracy: 0.5625
108/18 [==========>.....] - ETA: 1:02 - loss: 1.1102 - accuracy: 0.5625
109/18 [==========>.....] - ETA: 1:44 - loss: 1.1102 - accuracy: 0.5625
110/18 [==========>.....] - ETA: 1:26 - loss: 1.1102 - accuracy: 0.5625
111/18 [==========>.....] - ETA: 1:08 - loss: 1.1102 - accuracy: 0.5625
112/18 [==========>.....] - ETA: 1:50 - loss: 1.1102 - accuracy: 0.5625
113/18 [==========>.....] - ETA: 1:32 - loss: 1.1102 - accuracy: 0.5625
114/18 [==========>.....] - ETA: 1:14 - loss: 1.1102 - accuracy: 0.5625
115/18 [==========>.....] - ETA: 1:56 - loss: 1.1102 - accuracy: 0.5625
116/18 [==========>.....] - ETA: 1:38 - loss: 1.1102 - accuracy: 0.5625
117/18 [==========>.....] - ETA: 1:20 - loss: 1.1102 - accuracy: 0.5625
118/18 [==========>.....] - ETA: 1:02 - loss: 1.1102 - accuracy: 0.5625
119/18 [==========>.....] - ETA: 1:44 - loss: 1.1102 - accuracy: 0.5625
120/18 [==========>.....] - ETA: 1:26 - loss: 1.1102 - accuracy: 0.5625
121/18 [==========>.....] - ETA: 1:08 - loss: 1.1102 - accuracy: 0.5625
122/18 [==========>.....] - ETA: 1:50 - loss: 1.1102 - accuracy: 0.5625
123/18 [==========>.....] - ETA: 1:32 - loss: 1.1102 - accuracy: 0.5625
124/18 [==========>.....] - ETA: 1:14 - loss: 1.1102 - accuracy: 0.5625
125/18 [==========>.....] - ETA: 1:56 - loss: 1.1102 - accuracy: 0.5625
126/18 [==========>.....] - ETA: 1:38 - loss: 1.1102 - accuracy: 0.5625
127/18 [==========>.....] - ETA: 1:20 - loss: 1.1102 - accuracy: 0.5625
128/18 [==========>.....] - ETA: 1:02 - loss: 1.1102 - accuracy: 0.5625
129/18 [==========>.....] - ETA: 1:44 - loss: 1.1102 - accuracy: 0.5625
130/18 [==========>.....] - ETA: 1:26 - loss: 1.1102 - accuracy: 0.5625
131/18 [==========>.....] - ETA: 1:08 - loss: 1.1102 - accuracy: 0.5625
132/18 [==========>.....] - ETA: 1:50 - loss: 1.1102 - accuracy: 0.5625
133/18 [==========>.....] - ETA: 1:32 - loss: 1.1102 - accuracy: 0.5625
134/18 [==========>.....] - ETA: 1:14 - loss: 1.1102 - accuracy: 0.5625
135/18 [==========>.....] - ETA: 1:56 - loss: 1.1102 - accuracy: 0.5625
136/18 [==========>.....] - ETA: 1:38 - loss: 1.1102 - accuracy: 0.5625
137/18 [==========>.....] - ETA: 1:20 - loss: 1.1102 - accuracy: 0.5625
138/18 [==========>.....] - ETA: 1:02 - loss: 1.1102 - accuracy: 0.5625
139/18 [==========>.....] - ETA: 1:44 - loss: 1.1102 - accuracy: 0.5625
140/18 [==========>.....] - ETA: 1:26 - loss: 1.1102 - accuracy: 0.5625
141/18 [==========>.....] - ETA: 1:08 - loss: 1.1102 - accuracy: 0.5625
142/18 [==========>.....] - ETA: 1:50 - loss: 1.1102 - accuracy: 0.5625
143/18 [==========>.....] - ETA: 1:32 - loss: 1.1102 - accuracy: 0.5625
144/18 [==========>.....] - ETA: 1:14 - loss: 1.1102 - accuracy: 0.5625
145/18 [==========>.....] - ETA: 1:56 - loss: 1.1102 - accuracy: 0.5625
146/18 [==========>.....] - ETA: 1:38 - loss: 1.1102 - accuracy: 0.5625
147/18 [==========>.....] - ETA: 1:20 - loss: 1.1102 - accuracy: 0.5625
148/18 [==========>.....] - ETA: 1:02 - loss: 1.1102 - accuracy: 0.5625
149/18 [==========>.....] - ETA: 1:44 - loss: 1.1102 - accuracy: 0.5625
150/18 [==========>.....] - ETA: 1:26 - loss: 1.1102 - accuracy: 0.5625
151/18 [==========>.....] - ETA: 1:08 - loss: 1.1102 - accuracy: 0.5625
152/18 [==========>.....] - ETA: 1:50 - loss: 1.1102 - accuracy: 0.5625
153/18 [==========>.....] - ETA: 1:32 - loss: 1.1102 - accuracy: 0.5625
154/18 [==========>.....] - ETA: 1:14 - loss: 1.1102 - accuracy: 0.5625
155/18 [==========>.....] - ETA: 1:56 - loss: 1.1102 - accuracy: 0.5625
156/18 [==========>.....] - ETA: 1:38 - loss: 1.1102 - accuracy: 0.5625
157/18 [==========>.....] - ETA: 1:20 - loss: 1.1102 - accuracy: 0.5625
158/18 [==========>.....] - ETA: 1:02 - loss: 1.1102 - accuracy: 0.5625
159/18 [==========>.....] - ETA: 1:44 - loss: 1.1102 - accuracy: 0.5625
160/18 [==========>.....] - ETA: 1:26 - loss: 1.1102 - accuracy: 0.5625
161/18 [==========>.....] - ETA: 1:08 - loss: 1.1102 - accuracy: 0.5625
162/18 [==========>.....] - ETA: 1:50 - loss: 1.1102 - accuracy: 0.5625
163/18 [==========>.....] - ETA: 1:32 - loss: 1.1102 - accuracy: 0.5625
164/18 [==========>.....] - ETA: 1:14 - loss: 1.1102 - accuracy: 0.5625
165/18 [==========>.....] - ETA: 1:56 - loss: 1.1102 - accuracy: 0.5625
166/18 [==========>.....] - ETA: 1:38 - loss: 1.1102 - accuracy: 0.5625
167/18 [==========>.....] - ETA: 1:20 - loss: 1.1102 - accuracy: 0.5625
168/18 [==========>.....] - ETA: 1:02 - loss: 1.1102 - accuracy: 0.5625
169/18 [==========>.....] - ETA: 1:44 - loss: 1.1102 - accuracy: 0.5625
170/18 [==========>.....] - ETA: 1:26 - loss: 1.1102 - accuracy: 0.5625
171/18 [==========>.....] - ETA: 1:08 - loss: 1.1102 - accuracy: 0.5625
172/18 [==========>.....] - ETA: 1:50 - loss: 1.1102 - accuracy: 0.5625
173/18 [==========>.....] - ETA: 1:32 - loss: 1.1102 - accuracy: 0.5625
174/18 [==========>.....] - ETA: 1:14 - loss: 1.1102 - accuracy: 0.5625
175/18 [==========>.....] - ETA: 1:56 - loss: 1.1102 - accuracy: 0.5625
176/18 [==========>.....] - ETA: 1:38 - loss: 1.1102 - accuracy: 0.5625
177/18 [==========>.....] - ETA: 1:20 - loss: 1.1102 - accuracy: 0.5625
178/18 [==========>.....] - ETA: 1:02 - loss: 1.1102 - accuracy: 0.5625
179/18 [==========>.....] - ETA: 1:44 - loss: 1.1102 - accuracy: 0.5625
180/18 [==========>.....] - ETA: 1:26 - loss: 1.1102 - accuracy: 0.5625
181/18 [==========>.....] - ETA: 1:08 - loss: 1.1102 - accuracy: 0.5625
182/18 [==========>.....] - ETA: 1:50 - loss: 1.1102 - accuracy: 0.5625
183/18 [==========>.....] - ETA: 1:32 - loss: 1.1102 - accuracy: 0.5625
184/18 [==========>.....] - ETA: 1:14 - loss: 1.1102 - accuracy: 0.5625
185/18 [==========>.....] - ETA: 1:56 - loss: 1.1102 - accuracy: 0.5625
186/18 [==========>.....] - ETA: 1:38 - loss: 1.1102 - accuracy: 0.5625
187/18 [==========>.....] - ETA: 1:20 - loss: 1.1102 - accuracy: 0.5625
188/18 [==========>.....] - ETA: 1:02 - loss: 1.1102 - accuracy: 0.5625
189/18 [==========>.....] - ETA: 1:44 - loss: 1.1102 - accuracy: 0.5625
190/18 [==========>.....] - ETA: 1:26 - loss: 1.1102 - accuracy: 0.5625
191/18 [==========>.....] - ETA: 1:08 - loss: 1.1102 - accuracy: 0.5625
192/18 [==========>.....] - ETA: 1:50 - loss: 1.1102 - accuracy: 0.5625
193/18 [==========>.....] - ETA: 1:32 - loss: 1.1102 - accuracy: 0.5625
194/18 [==========>.....] - ETA: 1:14 - loss: 1.1102 - accuracy: 0.5625
195/18 [==========>.....] - ETA: 1:56 - loss: 1.1102 - accuracy: 0.5625
196/18 [==========>.....] - ETA: 1:38 - loss: 1.1102 - accuracy: 0.5625
197/18 [==========>.....] - ETA: 1:20 - loss: 1.1102 - accuracy: 0.5625
198/18 [==========>.....] - ETA: 1:02 - loss: 1.1102 - accuracy: 0.5625
199/18 [==========>.....] - ETA: 1:44 - loss: 1.1102 - accuracy: 0.5625
200/18 [==========>.....] - ETA: 1:26 - loss: 1.1102 - accuracy: 0.5625
201/18 [==========>.....] - ETA: 1:08 - loss: 1.1102 - accuracy: 0.5625
202/18 [==========>.....] - ETA: 1:50 - loss: 1.1102 - accuracy: 0.5625
203/18 [==========>.....] - ETA: 1:32 - loss: 1.1102 - accuracy: 0.5625
204/18 [==========>.....] - ETA: 1:14 - loss: 1.1102 - accuracy: 0.5625
205/18 [==========>.....] - ETA: 1:56 - loss: 1.1102 - accuracy: 0.5625
206/18 [==========>.....] - ETA: 1:38 - loss: 1.1102 - accuracy: 0.5625
207/18 [==========>.....] - ETA: 1:20 - loss: 1.1102 - accuracy: 0.5625
208/18 [==========>.....] - ETA: 1:02 - loss: 1.1102 - accuracy: 0.5625
209/18 [==========>.....] - ETA: 1:44 - loss: 1.1102 - accuracy: 0.5625
210/18 [==========>.....] - ETA: 1:26 - loss: 1.1102 - accuracy: 0.5625
211/18 [==========>.....] - ETA: 1:08 - loss: 1.1102 - accuracy: 0.5625
212/18 [==========>.....] - ETA: 1:50 - loss: 1.1102 - accuracy: 0.5625
213/18 [==========>.....] - ETA: 1:32 - loss: 1.1102 - accuracy: 0.5625
214/18 [==========>.....] - ETA: 1:14 - loss: 1.1102 - accuracy: 0.5625
215/18 [==========>.....] - ETA: 1:56 - loss: 1.1102 - accuracy: 0.5625
216/18 [==========>.....] - ETA: 1:38 - loss: 1.1102 - accuracy: 0.5625
217/18 [==========>.....] - ETA: 1:20 - loss: 1.1102 - accuracy: 0.5625
218/18 [==========>.....] - ETA: 1:02 - loss: 1.1102 - accuracy: 0.5625
219/18 [==========>.....] - ETA: 1:44 - loss: 1.1102 - accuracy: 0.5625
220/18 [==========>.....] - ETA: 1:26 - loss: 1.1102 - accuracy: 0.5625
221/18 [==========>.....] - ETA: 1:08 - loss: 1.1102 - accuracy: 0.5625
222/18 [==========>.....] - ETA: 1:50 - loss: 1.1102 - accuracy: 0.5625
223/18 [==========>.....] - ETA: 1:32 - loss: 1.1102 - accuracy: 0.5625
224/18 [==========>.....] - ETA: 1:14 - loss: 1.1102 - accuracy: 0.5625
225/18 [==========>.....] - ETA: 1:56 - loss: 1.1102 - accuracy: 0.5625
226/18 [==========>.....] - ETA: 1:38 - loss: 1.1102 - accuracy: 0.5625
227/18 [==========>.....] - ETA: 1:20 - loss: 1.1102 - accuracy: 0.5625
228/18 [==========>.....] - ETA: 1:02 - loss: 1.1102 - accuracy: 0.5625
229/18 [==========>.....] - ETA: 1:44 - loss: 1.1102 - accuracy: 0.5625
230/18 [==========>.....] - ETA: 1:26 - loss: 1.1102 - accuracy: 0.5625
231/18 [==========>.....] - ETA: 1:08 - loss: 1.1102 - accuracy: 0.5625
232/18 [==========>.....] - ETA: 1:50 - loss: 1.1102 - accuracy: 0.5625
233/18 [==========>.....] - ETA: 1:32 - loss: 1.1102 - accuracy: 0.5625
234/18 [==========>.....] - ETA: 1:14 - loss: 1.1102 - accuracy: 0.5625
235/18 [==========>.....] - ETA: 1:56 - loss: 1.1102 - accuracy: 0.5625
236/18 [==========>.....] - ETA: 1:38 - loss: 1.1102 - accuracy: 0.5625
237/18 [==========>.....] - ETA: 1:20 - loss: 1.1102 - accuracy: 0.5625
238/18 [==========>.....] - ETA: 1:02 - loss: 1.1102 - accuracy: 0.5625
239/18 [==========>.....] - ETA: 1:44 - loss: 1.1102 - accuracy: 0.5625
240/18 [==========>.....] - ETA: 1:26 - loss: 1.1102 - accuracy: 0.5625
241/18 [==========>.....] - ETA: 1:08 - loss: 1.1102 - accuracy: 0.5625
242/18 [==========>.....] - ETA: 1:50 - loss: 1.1102 - accuracy: 0.5625
243/18 [==========>.....] - ETA: 1:32 - loss: 1.1102 - accuracy: 0.5625
244/18 [==========>.....] - ETA: 1:14 - loss: 1.1102 - accuracy: 0.5625
245/18 [==========>.....] - ETA: 1:56 - loss: 1.1102 - accuracy: 0.5625
246/18 [==========>.....] - ETA: 1:38 - loss: 1.1102 - accuracy: 0.5625
247/18 [==========>.....] - ETA: 1:20 - loss: 1.1102 - accuracy: 0.5625
248/18 [==========>.....] - ETA: 1:02 - loss: 1.1102 - accuracy: 0.5625
249/18 [==========>.....] - ETA: 1:44 - loss: 1.1102 - accuracy: 0.5625
250/18 [==========>.....] - ETA: 1:26 - loss: 1.1102 - accuracy: 0.5625
251/18 [==========>.....] - ETA: 1:08 - loss: 1.1102 - accuracy: 0.5625
252/18 [==========>.....] - ETA: 1:50 - loss: 1.1102 - accuracy: 0.5625
253/18 [==========>.....] - ETA: 1:32 - loss: 1.1102 - accuracy: 0.5625
254/18 [==========>.....] - ETA: 1:14 - loss: 1.1102 - accuracy: 0.5625
255/18 [==========>.....] - ETA: 1:56 - loss: 1.1102 - accuracy: 0.5625
256/18 [==========>.....] - ETA: 1:38 - loss: 1.1102 - accuracy: 0.5625
257/18 [==========>.....] - ETA: 1:20 - loss: 1.1102 - accuracy: 0.5625
258/18 [==========>.....] - ETA: 1:02 - loss: 1.1102 - accuracy: 0.5625
259/18 [==========>.....] - ETA: 1:44 - loss: 1.1102 - accuracy: 0.5625
260/18 [==========>.....] - ETA: 1:26 - loss: 1.1102 - accuracy: 0.5625
261/18 [==========>.....] - ETA: 1:08 - loss: 1.1102 - accuracy: 0.5625
262/18 [==========>.....] - ETA: 1:50 - loss: 1.1102 - accuracy: 0.5625
263/18 [==========>.....] - ETA: 1:32 - loss: 1.1102 - accuracy: 0.5625
264/18 [==========>.....] - ETA: 1:14 - loss: 1.1102 - accuracy: 0.5625
265/18 [==========>.....] - ETA: 1:56 - loss: 1.1102 - accuracy: 0.5625
266/18 [==========>.....] - ETA: 1:38 - loss: 1.1102 - accuracy: 0.5625
267/18 [==========>.....] - ETA: 1:20 - loss: 1.1102 - accuracy: 0.5625
268/18 [==========>.....] - ETA: 1:02 - loss: 1.1102 - accuracy: 0.5625
269/18 [==========>.....] - ETA: 1:44 - loss: 1.1102 - accuracy: 0.5625
270/18 [==========>.....] - ETA: 1:26 - loss: 1.1102 - accuracy: 0.5625
271/18 [==========>.....] - ETA: 1:08 - loss: 1.1102 - accuracy: 0.5625
272/18 [==========>.....] - ETA: 1:50 - loss: 1.1102 - accuracy: 0.5625
273/18 [==========>.....] - ETA: 1:32 - loss: 1.1102 - accuracy: 0.5625
274/18 [==========>.....] - ETA: 1:14 - loss: 1.1102 - accuracy: 0.5625
275/18 [==========>.....] - ETA: 1:56 - loss: 1.1102 - accuracy: 0.5625
276/18 [==========>.....] - ETA: 1:38 - loss: 1.1102 - accuracy: 0.5625
277/18 [==========>.....] - ETA: 1:20 - loss: 1.1102 - accuracy: 0.5625
278/18 [==========>.....] - ETA: 1:02 - loss: 1.1102 - accuracy: 0.5625
279/18 [==========>.....] - ETA: 1:44 - loss: 1.1102 - accuracy: 0.5625
280/18 [==========>.....] - ETA: 1:26 - loss: 1.1102 - accuracy: 0.5625
281/18 [==========>.....] - ETA: 1:08 - loss: 1.1102 - accuracy: 0.5625
282/18 [==========>.....] - ETA: 1:50 - loss: 1.1102 - accuracy: 0.5625
283/18 [==========>.....] - ETA: 1:32 - loss: 1.1102 - accuracy: 0.5625
284/18 [==========>.....] - ETA: 1:14 - loss: 1.1102 - accuracy: 0.5625
285/18 [==========>.....] - ETA: 1:56 - loss: 1.1102 - accuracy: 0.5625
286/18 [==========>.....] - ETA: 1:38 - loss: 1.1102 - accuracy: 0.5625
287/18 [==========>.....] - ETA: 1:20 - loss: 1.1102 - accuracy: 0.5625
288/18 [==========>.....] - ETA: 1:02 - loss: 1.1102 - accuracy: 0.5625
289/18 [==========>.....] - ETA: 1:44 - loss: 1.1102 - accuracy: 0.5625
290/18 [==========>.....] - ETA: 1:26 - loss: 1.1102 - accuracy: 0.5625
291/18 [==========>.....] - ETA: 1:08 - loss: 1.1102 - accuracy: 0.5625
292/18 [==========>.....] - ETA: 1:50 - loss: 1.1102 - accuracy: 0.5625
293/18 [==========>.....] - ETA: 1:32 - loss: 1.1102 - accuracy: 0.5625
294/18 [==========>.....] - ETA: 1:14 - loss: 1.1102 - accuracy: 0.5625
295/18 [==========>.....] - ETA: 1:56 - loss: 1.1102 - accuracy: 0.5625
296/18 [==========>.....] - ETA: 1:38 - loss: 1.1102 - accuracy: 0.5625
297/18 [==========>.....] - ETA: 1:20 - loss: 1.1102 - accuracy: 0.5625
298/18 [==========>.....] - ETA: 1:02 - loss: 1.1102 - accuracy: 0.5625
299/18 [==========>.....] - ETA: 1:44 - loss: 1.1102 - accuracy: 0.5625
300/18 [==========>.....] - ETA: 1:26 - loss: 1.1102 - accuracy: 0.5625
301/18 [==========>.....] - ETA: 1:08 - loss: 1.1102 - accuracy: 0.5625
302/18 [==========>.....] - ETA: 1:50 - loss: 1.1102 - accuracy: 0.5625
303/18 [==========>.....] - ETA: 1:32 - loss: 1.1102 - accuracy: 0.5625
304/18 [==========>.....] - ETA: 1:14 - loss: 1.1102 - accuracy: 0.5625
305/18 [==========>.....] - ETA: 1:56 - loss: 1.1102 - accuracy: 0.5625
306/18 [==========>.....] - ETA: 1:38 - loss: 1.1102 - accuracy: 0.5625
307/18 [==========>.....] - ETA: 1:20 - loss: 1.1102 - accuracy: 0.5625
308/18 [==========>.....] - ETA: 1:02 - loss: 1.1102 - accuracy: 0.5625
309/18 [==========>.....] - ETA: 1:44 - loss: 1.1102 - accuracy: 0.5625
310/18 [==========>.....] - ETA: 1:26 - loss: 1.1102 - accuracy: 0.5625
311/18 [==========>.....] - ETA: 1:08 - loss: 1.1102 - accuracy: 0.5625
312/18 [==========>.....] - ETA: 1:50 - loss: 1.1102 - accuracy: 0.5625
313/18 [==========>.....] - ETA: 1:32 - loss: 1.1102 - accuracy: 0.5625
314/18 [==========>.....] - ETA: 1:14 - loss: 1.1102 - accuracy: 0.5625
315/18 [==========>.....] - ETA: 1:56 - loss: 1.1102 - accuracy: 0.5625
316/18 [==========>.....] - ETA: 1:38 - loss: 1.1102 - accuracy: 0.5625
317/18 [==========>.....] - ETA: 1:20 - loss: 1.1102 - accuracy: 0.5625
318/18 [==========>.....] - ETA: 1:02 - loss: 1.1102 - accuracy: 0.5625
319/18 [==========>.....] - ETA: 1:44 - loss: 1.1102 - accuracy: 0.5625
320/18 [==========>.....] - ETA: 1:26 - loss: 1.1102 - accuracy: 0.5625
321/18 [==========>.....] - ETA: 1:08 - loss: 1.1102 - accuracy: 0.5625
322/18 [==========>.....] - ETA: 1:50 - loss: 1.1102 - accuracy: 0.5625
323/18 [==========>.....] - ETA: 1:32 - loss: 1.1102 - accuracy: 0.5625
324/18 [==========>.....] - ETA: 1:14 - loss: 1.1102 - accuracy: 0.5625
325/18 [==========>.....] - ETA: 1:56 - loss: 1.1102 - accuracy: 0.5625
326/18 [==========>.....] - ETA: 1:38 - loss: 1.1102 - accuracy: 0.5625
327/18 [==========>.....] - ETA: 1:20 - loss: 1.1102 - accuracy: 0.5625
328/18 [==========>.....] - ETA: 1:02 - loss: 1.1102 - accuracy: 0.5625
329/18 [==========>.....] - ETA: 1:44 - loss: 1.1102 - accuracy: 0.5625
330/18 [==========>.....] - ETA: 1:26 - loss: 1.1102 - accuracy: 0.5625
331/18 [==========>.....] - ETA: 1:08 - loss: 1.1102 - accuracy: 0.5625
332/18 [==========>.....] - ETA: 1:50 - loss: 1.1102 - accuracy: 0.5625
333/18 [==========>.....] - ETA: 1:32 - loss: 1.1102 - accuracy: 0.5625
334/18 [==========>.....] - ETA: 1:14 - loss: 1.1102 - accuracy: 0.5625
335/18 [==========>.....] - ETA: 1:56 - loss: 1.1102 - accuracy: 0.5625
336/18 [==========>.....] - ETA: 1:38 - loss: 1.1102 - accuracy: 0.5625
337/18 [==========>.....] - ETA: 1:20 - loss: 1.1102 - accuracy: 0.5625
338/18 [==========>.....] - ETA: 1:02 - loss: 1.1102 - accuracy: 0.5625
339/18 [==========>.....] - ETA: 1:44 - loss: 1.1102 - accuracy: 0.5625
340/18 [==========>.....] - ETA: 1:26 - loss: 1.1102 - accuracy: 0.5625
341/18 [==========>.....] - ETA: 1:08 - loss: 1.1102 - accuracy: 0.5625
342/18 [==========>.....] - ETA: 1:50 - loss: 1.1102 - accuracy: 0.5625
343/18 [==========>.....] - ETA: 1:32 - loss: 1.1102 - accuracy: 0.5625
344/18 [==========>.....] - ETA: 1:14 - loss: 1.1102 - accuracy: 0.5625
345/18 [==========>.....] - ETA: 1:56 - loss: 1.1102 - accuracy: 0.5625
346/18 [==========>.....] - ETA: 1:38 - loss: 1.1102 - accuracy: 0.5625
347/18 [==========>.....] - ETA: 1:20 - loss: 1.1102 - accuracy: 0.5625
348/18 [==========>.....] - ETA: 1:02 - loss: 1.1102 - accuracy: 0.5625
349/18 [==========>.....] - ETA: 1:44 - loss: 1.1102 - accuracy: 0.5625
350/18 [==========>.....] - ETA: 1:26 - loss: 1.1102 - accuracy: 0.5625
351/18 [==========>.....] - ETA: 1:08 - loss: 1.1102 - accuracy: 0.5625
352/18 [==========>.....] - ETA: 1:50 - loss: 1.1102 - accuracy: 0.5625
353/18 [==========>.....] - ETA: 1:32 - loss: 1.1102 - accuracy: 0.5625
354/18 [==========>.....] - ETA: 1:14 - loss: 1.1102 - accuracy: 0.5625
355/18 [==========>.....] - ETA: 1:56 - loss: 1.1102 - accuracy: 0.5625
356/18 [==========>.....] - ETA: 1:38 - loss: 1.1102 - accuracy: 0.5625
357/18 [==========>.....] - ETA: 1:20 - loss: 1.1102 - accuracy: 0.5625
358/18 [==========>.....] - ETA: 1:02 - loss: 1.1102 - accuracy: 0.5625
359/18 [==========>.....] - ETA: 1:44 - loss: 1.1102 - accuracy: 0.5625
360/18 [==========>.....] - ETA: 1:26 - loss: 1.1102 - accuracy: 0.5625
361/18 [==========>.....] - ETA: 1:08 - loss: 1.1102 - accuracy: 0.5625
362/18 [==========>.....] - ETA: 1:50 - loss: 1.1102 - accuracy: 0.5625
363/18 [==========>.....] - ETA: 1:32 - loss: 1.1102 - accuracy: 0.5625
364/18 [==========>.....] - ETA: 1:14 - loss: 1.1102 - accuracy: 0.5625
365/18 [==========>.....] - ETA: 1:56 - loss: 1.1102 - accuracy: 0.5625
366/18 [==========>.....] - ETA: 1:38 - loss: 1.1102 - accuracy: 0.5625
367/18 [==========>.....] - ETA: 1:20 - loss: 1.1102 - accuracy: 0.5625
368/18 [==========>.....] - ETA: 1:02 - loss: 1.1102 - accuracy: 0.5625
369/18 [==========>.....] - ETA: 1:44 - loss: 1.1102 - accuracy: 0.5625
370/18 [==========>.....] - ETA: 1:26 - loss: 1.1102 - accuracy: 0.5625
371/18 [==========>.....] - ETA: 1:08 - loss: 1.1102 - accuracy: 0.5625
372/18 [==========>.....] - ETA: 1:50 - lo
```

```
# Making predictions on the training data
y_pred_gnbc = TUNED_TOP_TOTAL_NAME_GNBC.predict(TUNED_DATA_TRAIN)
```

```
RESULTS(y_true=y_train,y_pred=y_pred_gnbc,  ID=y_train.index)
```

```
# Top half predictions
y_pred_gnbc[:10]
```

```
array([0, 0, 0, 0, 0, 0, 0, 0, 0, 0])
```

```
# Count of top half predictions
y_pred_gnbc.sum()
```

```
1500
```

```
# Top half predictions of test class
y_pred_gnbc = y_pred_gnbc[y_pred_gnbc==1]
y_pred_gnbc[:10]
```

```
Series([], dtype: int64)
```

```
# Top half predictions of test class
y_pred_gnbc.shape[0]/y_pred_gnbc.shape[1]
```

```
nan
```

```
# Top half predictions of test class
TUNED_DATA_TEST = TUNED_TOP_TOTAL_NAME_GNBC[y_pred_gnbc.index]
TUNED_DATA_TEST.shape[0]/TUNED_DATA_TRAIN.shape[0]
```

```
nan
```

Evaluating the model predictions

```
# Top half predictions
y_pred_gnbc = y_pred_gnbc[y_pred_gnbc.index]
y_pred_gnbc[:10]
```

```
Series([], dtype: int64)
```

```
# Top half predictions
y_pred_gnbc.shape[0]/y_pred_gnbc.shape[1]
```

```
nan
```

```
# Top half predictions
y_pred_gnbc.sum()
```

```
0
```

```
# Top half predictions
y_pred_gnbc.shape[0]
```

```
0
```

```
# Top half predictions
y_pred_gnbc.shape[1]
```

```
1
```

```
# Top half predictions
y_pred_gnbc.shape
```

```
(0,)
```

```
# Top half predictions
y_pred_gnbc.sum()/y_pred_gnbc.shape[0]
```

```
nan
```

```
# Top half predictions
y_pred_gnbc.sum()/y_pred_gnbc.shape[1]
```

```
0.0
```

```
{'_mapping_part': 0.17442132639791288,
 'make_future_recipes': 0.08230172413793103,
 'save_mapping_info': 0.08230172413793103,
 'display': 0.07327586206896552,
 'numpy': 0.07327586206896552,
 'matplotlib.pyplot': 0.07327586206896552,
 'seaborn': 0.07327586206896552,
 'warnings': 0.07327586206896552,
 'filterwarnings': 0.07327586206896552,
 'drop_duplicates': 0.07327586206896552,
 'head': 0.07327586206896552,
 'DataFrame': 0.07327586206896552,
 'to_csv': 0.07327586206896552,
 'value_counts': 0.07327586206896552,
 'mapping': 0.07327586206896552,
 'isnull': 0.07327586206896552,
 'sum': 0.07327586206896552,
 'describe': 0.07327586206896552,
 'columns': 0.07327586206896552,
 'shape': 0.07327586206896552,
 'unique_products': 0.07327586206896552,
 'unique_customers': 0.07327586206896552,
 'unique_stores': 0.07327586206896552,
 'unique_cities': 0.07327586206896552,
 'unique_states': 0.07327586206896552,
 'item_frame': 0.07327586206896552,
 'item_frame.head': 0.07327586206896552,
 'item_frame.shape': 0.07327586206896552,
 'item_frame.columns': 0.07327586206896552,
 'item_frame.dtypes': 0.07327586206896552,
 'item_frame.isnull': 0.07327586206896552,
 'item_frame.isnull().sum': 0.07327586206896552,
 'item_frame.describe': 0.07327586206896552,
 'item_frame.describe(include=[object])': 0.07327586206896552,
 'item_frame.nunique': 0.07327586206896552,
 'item_frame.nunique()': 0.07327586206896552,
 'fillna': 0.07327586206896552,
 'fillna(0)': 0.07327586206896552,
 'fillna(0).isnull': 0.07327586206896552,
 'fillna(0).isnull().sum': 0.07327586206896552,
 'dropna': 0.07327586206896552,
 'dropna(subset=[target_col])': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts()': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20)': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\n': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title(': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 ': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 ': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\n': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint(': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total ': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col]': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique()': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())).': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())).format': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())).format(': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())).format(len': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())).format(len(': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())).format(len(df': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())).format(len(df[': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())).format(len(df[target_col]': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())).format(len(df[target_col].': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())).format(len(df[target_col].unique': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())).format(len(df[target_col].unique()': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())).format(len(df[target_col].unique())).': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())).format(len(df[target_col].unique())).format': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())).format(len(df[target_col].unique())).format(': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())).format(len(df[target_col].unique())).format(df': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())).format(len(df[target_col].unique())).format(df[': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())).format(len(df[target_col].unique())).format(df[target_col]': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())).format(len(df[target_col].unique())).format(df[target_col].': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())).format(len(df[target_col].unique())).format(df[target_col].unique': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())).format(len(df[target_col].unique())).format(df[target_col].unique()': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())).format(len(df[target_col].unique())).format(df[target_col].unique())': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())).format(len(df[target_col].unique())).format(df[target_col].unique()).': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())).format(len(df[target_col].unique())).format(df[target_col].unique()).format': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())).format(len(df[target_col].unique())).format(df[target_col].unique()).format(': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())).format(len(df[target_col].unique())).format(df[target_col].unique()).format(len': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())).format(len(df[target_col].unique())).format(df[target_col].unique()).format(len(': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())).format(len(df[target_col].unique())).format(df[target_col].unique()).format(len(df': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())).format(len(df[target_col].unique())).format(df[target_col].unique()).format(len(df[': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())).format(len(df[target_col].unique())).format(df[target_col].unique()).format(len(df[target_col]': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())).format(len(df[target_col].unique())).format(df[target_col].unique()).format(len(df[target_col].': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())).format(len(df[target_col].unique())).format(df[target_col].unique()).format(len(df[target_col].unique': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())).format(len(df[target_col].unique())).format(df[target_col].unique()).format(len(df[target_col].unique()': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())).format(len(df[target_col].unique())).format(df[target_col].unique()).format(len(df[target_col].unique())).': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())).format(len(df[target_col].unique())).format(df[target_col].unique()).format(len(df[target_col].unique())).format': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())).format(len(df[target_col].unique())).format(df[target_col].unique()).format(len(df[target_col].unique())).format(': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())).format(len(df[target_col].unique())).format(df[target_col].unique()).format(len(df[target_col].unique())).format(len': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())).format(len(df[target_col].unique())).format(df[target_col].unique()).format(len(df[target_col].unique())).format(df': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())).format(len(df[target_col].unique())).format(df[target_col].unique()).format(len(df[target_col].unique())).format(df[': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())).format(len(df[target_col].unique())).format(df[target_col].unique()).format(len(df[target_col].unique())).format(df[target_col]': 0.07327586206896552,
 'dropna(subset=[target_col])[target_col].value_counts().head(20).plot(kind='bar',figsize=(14,4)).set_ylabel('Count',rotation=90,color='steelblue',alpha=0.8,edgecolor='black',linewidth=0.5)[0].set_rotation(0)\nplt.title('Top 20 {target_col}').show()\nprint('Total {target_col}').format(len(df[target_col].unique())).format(len(df[target_col].unique())).format(df[target_col].unique()
```

```
{
  "data": [{"id":"1","name":"Ali","gender":"male","email":"ali@gmail.com","phone":"0123-456-789","address":"Jl. Merdeka No. 1","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.1","mac_address":"00:1A:2B:3C:4D:5E","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"2","name":"Budi","gender":"male","email":"budi@gmail.com","phone":"0123-456-790","address":"Jl. Merdeka No. 2","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.2","mac_address":"00:1A:2B:3C:4D:5F","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"3","name":"Cindy","gender":"male","email":"cindy@gmail.com","phone":"0123-456-791","address":"Jl. Merdeka No. 3","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.3","mac_address":"00:1A:2B:3C:4D:60","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"4","name":"Dwi","gender":"male","email":"dwi@gmail.com","phone":"0123-456-792","address":"Jl. Merdeka No. 4","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.4","mac_address":"00:1A:2B:3C:4D:61","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"5","name":"Eka","gender":"male","email":"eka@gmail.com","phone":"0123-456-793","address":"Jl. Merdeka No. 5","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.5","mac_address":"00:1A:2B:3C:4D:62","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"6","name":"Fani","gender":"male","email":"fani@gmail.com","phone":"0123-456-794","address":"Jl. Merdeka No. 6","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.6","mac_address":"00:1A:2B:3C:4D:63","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"7","name":"Gita","gender":"male","email":"gita@gmail.com","phone":"0123-456-795","address":"Jl. Merdeka No. 7","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.7","mac_address":"00:1A:2B:3C:4D:64","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"8","name":"Hadi","gender":"male","email":"hadi@gmail.com","phone":"0123-456-796","address":"Jl. Merdeka No. 8","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.8","mac_address":"00:1A:2B:3C:4D:65","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"9","name":"Indra","gender":"male","email":"indra@gmail.com","phone":"0123-456-797","address":"Jl. Merdeka No. 9","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.9","mac_address":"00:1A:2B:3C:4D:66","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"10","name":"Jaka","gender":"male","email":"jaka@gmail.com","phone":"0123-456-798","address":"Jl. Merdeka No. 10","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.10","mac_address":"00:1A:2B:3C:4D:67","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_" at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"11","name":"Kania","gender":"male","email":"kania@gmail.com","phone":"0123-456-799","address":"Jl. Merdeka No. 11","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.11","mac_address":"00:1A:2B:3C:4D:68","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"12","name":"Lia","gender":"male","email":"lia@gmail.com","phone":"0123-456-800","address":"Jl. Merdeka No. 12","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.12","mac_address":"00:1A:2B:3C:4D:69","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"13","name":"Mira","gender":"male","email":"mira@gmail.com","phone":"0123-456-801","address":"Jl. Merdeka No. 13","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.13","mac_address":"00:1A:2B:3C:4D:6A","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"14","name":"Nadi","gender":"male","email":"nadi@gmail.com","phone":"0123-456-802","address":"Jl. Merdeka No. 14","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.14","mac_address":"00:1A:2B:3C:4D:6B","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"15","name":"Oka","gender":"male","email":"oka@gmail.com","phone":"0123-456-803","address":"Jl. Merdeka No. 15","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.15","mac_address":"00:1A:2B:3C:4D:6C","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"16","name":"Pani","gender":"male","email":"pani@gmail.com","phone":"0123-456-804","address":"Jl. Merdeka No. 16","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.16","mac_address":"00:1A:2B:3C:4D:6D","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"17","name":"Qori","gender":"male","email":"qori@gmail.com","phone":"0123-456-805","address":"Jl. Merdeka No. 17","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.17","mac_address":"00:1A:2B:3C:4D:6E","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"18","name":"Rani","gender":"male","email":"rani@gmail.com","phone":"0123-456-806","address":"Jl. Merdeka No. 18","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.18","mac_address":"00:1A:2B:3C:4D:6F","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"19","name":"Sari","gender":"male","email":"sari@gmail.com","phone":"0123-456-807","address":"Jl. Merdeka No. 19","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.19","mac_address":"00:1A:2B:3C:4D:70","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"20","name":"Tari","gender":"male","email":"tari@gmail.com","phone":"0123-456-808","address":"Jl. Merdeka No. 20","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.20","mac_address":"00:1A:2B:3C:4D:71","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"21","name":"Ali","gender":"male","email":"ali@gmail.com","phone":"0123-456-789","address":"Jl. Merdeka No. 1","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.1","mac_address":"00:1A:2B:3C:4D:5E","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"22","name":"Budi","gender":"male","email":"budi@gmail.com","phone":"0123-456-790","address":"Jl. Merdeka No. 2","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.2","mac_address":"00:1A:2B:3C:4D:5F","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"23","name":"Cindy","gender":"male","email":"cindy@gmail.com","phone":"0123-456-791","address":"Jl. Merdeka No. 3","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.3","mac_address":"00:1A:2B:3C:4D:60","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"24","name":"Dwi","gender":"male","email":"dwi@gmail.com","phone":"0123-456-792","address":"Jl. Merdeka No. 4","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.4","mac_address":"00:1A:2B:3C:4D:61","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"25","name":"Eka","gender":"male","email":"eka@gmail.com","phone":"0123-456-793","address":"Jl. Merdeka No. 5","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.5","mac_address":"00:1A:2B:3C:4D:62","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"26","name":"Fani","gender":"male","email":"fani@gmail.com","phone":"0123-456-794","address":"Jl. Merdeka No. 6","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.6","mac_address":"00:1A:2B:3C:4D:63","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"27","name":"Gita","gender":"male","email":"gita@gmail.com","phone":"0123-456-795","address":"Jl. Merdeka No. 7","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.7","mac_address":"00:1A:2B:3C:4D:64","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"28","name":"Hadi","gender":"male","email":"hadi@gmail.com","phone":"0123-456-796","address":"Jl. Merdeka No. 8","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.8","mac_address":"00:1A:2B:3C:4D:65","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"29","name":"Indra","gender":"male","email":"indra@gmail.com","phone":"0123-456-797","address":"Jl. Merdeka No. 9","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.9","mac_address":"00:1A:2B:3C:4D:66","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"30","name":"Jaka","gender":"male","email":"jaka@gmail.com","phone":"0123-456-798","address":"Jl. Merdeka No. 10","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.10","mac_address":"00:1A:2B:3C:4D:67","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_" at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"31","name":"Kania","gender":"male","email":"kania@gmail.com","phone":"0123-456-799","address":"Jl. Merdeka No. 11","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.11","mac_address":"00:1A:2B:3C:4D:68","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"32","name":"Lia","gender":"male","email":"lia@gmail.com","phone":"0123-456-800","address":"Jl. Merdeka No. 12","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.12","mac_address":"00:1A:2B:3C:4D:69","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"33","name":"Mira","gender":"male","email":"mira@gmail.com","phone":"0123-456-801","address":"Jl. Merdeka No. 13","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.13","mac_address":"00:1A:2B:3C:4D:6A","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"34","name":"Nadi","gender":"male","email":"nadi@gmail.com","phone":"0123-456-802","address":"Jl. Merdeka No. 14","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.14","mac_address":"00:1A:2B:3C:4D:6B","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"35","name":"Oka","gender":"male","email":"oka@gmail.com","phone":"0123-456-803","address":"Jl. Merdeka No. 15","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.15","mac_address":"00:1A:2B:3C:4D:6C","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"36","name":"Pani","gender":"male","email":"pani@gmail.com","phone":"0123-456-804","address":"Jl. Merdeka No. 16","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.16","mac_address":"00:1A:2B:3C:4D:6D","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"37","name":"Qori","gender":"male","email":"qori@gmail.com","phone":"0123-456-805","address":"Jl. Merdeka No. 17","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.17","mac_address":"00:1A:2B:3C:4D:6E","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"38","name":"Rani","gender":"male","email":"rani@gmail.com","phone":"0123-456-806","address":"Jl. Merdeka No. 18","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.18","mac_address":"00:1A:2B:3C:4D:6F","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"39","name":"Sari","gender":"male","email":"sari@gmail.com","phone":"0123-456-807","address":"Jl. Merdeka No. 19","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.19","mac_address":"00:1A:2B:3C:4D:70","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"40","name":"Tari","gender":"male","email":"tari@gmail.com","phone":"0123-456-808","address":"Jl. Merdeka No. 20","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.20","mac_address":"00:1A:2B:3C:4D:71","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"41","name":"Ali","gender":"male","email":"ali@gmail.com","phone":"0123-456-789","address":"Jl. Merdeka No. 1","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.1","mac_address":"00:1A:2B:3C:4D:5E","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"42","name":"Budi","gender":"male","email":"budi@gmail.com","phone":"0123-456-790","address":"Jl. Merdeka No. 2","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.2","mac_address":"00:1A:2B:3C:4D:5F","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"43","name":"Cindy","gender":"male","email":"cindy@gmail.com","phone":"0123-456-791","address":"Jl. Merdeka No. 3","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.3","mac_address":"00:1A:2B:3C:4D:60","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"44","name":"Dwi","gender":"male","email":"dwi@gmail.com","phone":"0123-456-792","address":"Jl. Merdeka No. 4","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.4","mac_address":"00:1A:2B:3C:4D:61","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"45","name":"Eka","gender":"male","email":"eka@gmail.com","phone":"0123-456-793","address":"Jl. Merdeka No. 5","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.5","mac_address":"00:1A:2B:3C:4D:62","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"46","name":"Fani","gender":"male","email":"fani@gmail.com","phone":"0123-456-794","address":"Jl. Merdeka No. 6","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.6","mac_address":"00:1A:2B:3C:4D:63","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"47","name":"Gita","gender":"male","email":"gita@gmail.com","phone":"0123-456-795","address":"Jl. Merdeka No. 7","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.7","mac_address":"00:1A:2B:3C:4D:64","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"48","name":"Hadi","gender":"male","email":"hadi@gmail.com","phone":"0123-456-796","address":"Jl. Merdeka No. 8","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.8","mac_address":"00:1A:2B:3C:4D:65","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"49","name":"Indra","gender":"male","email":"indra@gmail.com","phone":"0123-456-797","address":"Jl. Merdeka No. 9","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.9","mac_address":"00:1A:2B:3C:4D:66","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"50","name":"Jaka","gender":"male","email":"jaka@gmail.com","phone":"0123-456-798","address":"Jl. Merdeka No. 10","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.10","mac_address":"00:1A:2B:3C:4D:67","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_" at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"51","name":"Kania","gender":"male","email":"kania@gmail.com","phone":"0123-456-799","address":"Jl. Merdeka No. 11","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.11","mac_address":"00:1A:2B:3C:4D:68","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2024-01-15 08:30:00","updated_at":"2024-01-15 08:30:00"},
  {"id":"52","name":"Lia","gender":"male","email":"lia@gmail.com","phone":"0123-456-800","address":"Jl. Merdeka No. 12","city":"Jakarta","country":"Indonesia","zipcode":"10110","company":"PT. Maju Jaya","job_title":"Manager","salary":"15000000","birthdate":"1985-03-12","ip_address":"192.168.1.12","mac_address":"00:1A:2B:3C:4D:69","user_agent":"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36","latitude":"-6.2088","longitude":"106.8456","created_at":"2
```

```
/ data/dl_food_classes_10_percent/train/steak/2133.jpg
/ data/dl_food_classes_10_percent/train/steak/2134.jpg
/ data/dl_food_classes_10_percent/train/steak/2135.jpg
/ data/dl_food_classes_10_percent/train/steak/2136.jpg
/ data/dl_food_classes_10_percent/train/steak/2137.jpg
/ data/dl_food_classes_10_percent/train/steak/2138.jpg
/ data/dl_food_classes_10_percent/train/steak/2139.jpg
/ data/dl_food_classes_10_percent/train/steak/2140.jpg
/ data/dl_food_classes_10_percent/train/steak/2141.jpg
/ data/dl_food_classes_10_percent/train/steak/2142.jpg
/ data/dl_food_classes_10_percent/train/steak/2143.jpg
/ data/dl_food_classes_10_percent/train/steak/2144.jpg
/ data/dl_food_classes_10_percent/train/steak/2145.jpg
/ data/dl_food_classes_10_percent/train/steak/2146.jpg
/ data/dl_food_classes_10_percent/train/steak/2147.jpg
/ data/dl_food_classes_10_percent/train/steak/2148.jpg
/ data/dl_food_classes_10_percent/train/steak/2149.jpg
/ data/dl_food_classes_10_percent/train/steak/2150.jpg
/ data/dl_food_classes_10_percent/train/steak/2151.jpg
/ data/dl_food_classes_10_percent/train/steak/2152.jpg
/ data/dl_food_classes_10_percent/train/steak/2153.jpg
/ data/dl_food_classes_10_percent/train/steak/2154.jpg
/ data/dl_food_classes_10_percent/train/steak/2155.jpg
/ data/dl_food_classes_10_percent/train/steak/2156.jpg
/ data/dl_food_classes_10_percent/train/steak/2157.jpg
/ data/dl_food_classes_10_percent/train/steak/2158.jpg
/ data/dl_food_classes_10_percent/train/steak/2159.jpg
/ data/dl_food_classes_10_percent/train/steak/2160.jpg
/ data/dl_food_classes_10_percent/train/steak/2161.jpg
/ data/dl_food_classes_10_percent/train/steak/2162.jpg
/ data/dl_food_classes_10_percent/train/steak/2163.jpg
/ data/dl_food_classes_10_percent/train/steak/2164.jpg
/ data/dl_food_classes_10_percent/train/steak/2165.jpg
/ data/dl_food_classes_10_percent/train/steak/2166.jpg
/ data/dl_food_classes_10_percent/train/steak/2167.jpg
/ data/dl_food_classes_10_percent/train/steak/2168.jpg
/ data/dl_food_classes_10_percent/train/steak/2169.jpg
/ data/dl_food_classes_10_percent/train/steak/2170.jpg
/ data/dl_food_classes_10_percent/train/steak/2171.jpg
/ data/dl_food_classes_10_percent/train/steak/2172.jpg
/ data/dl_food_classes_10_percent/train/steak/2173.jpg
/ data/dl_food_classes_10_percent/train/steak/2174.jpg
/ data/dl_food_classes_10_percent/train/steak/2175.jpg
/ data/dl_food_classes_10_percent/train/steak/2176.jpg
/ data/dl_food_classes_10_percent/train/steak/2177.jpg
/ data/dl_food_classes_10_percent/train/steak/2178.jpg
/ data/dl_food_classes_10_percent/train/steak/2179.jpg
/ data/dl_food_classes_10_percent/train/steak/2180.jpg
/ data/dl_food_classes_10_percent/train/steak/2181.jpg
/ data/dl_food_classes_10_percent/train/steak/2182.jpg
/ data/dl_food_classes_10_percent/train/steak/2183.jpg
/ data/dl_food_classes_10_percent/train/steak/2184.jpg
/ data/dl_food_classes_10_percent/train/steak/2185.jpg
/ data/dl_food_classes_10_percent/train/steak/2186.jpg
/ data/dl_food_classes_10_percent/train/steak/2187.jpg
/ data/dl_food_classes_10_percent/train/steak/2188.jpg
/ data/dl_food_classes_10_percent/train/steak/2189.jpg
/ data/dl_food_classes_10_percent/train/steak/2190.jpg
/ data/dl_food_classes_10_percent/train/steak/2191.jpg
/ data/dl_food_classes_10_percent/train/steak/2192.jpg
/ data/dl_food_classes_10_percent/train/steak/2193.jpg
/ data/dl_food_classes_10_percent/train/steak/2194.jpg
/ data/dl_food_classes_10_percent/train/steak/2195.jpg
/ data/dl_food_classes_10_percent/train/steak/2196.jpg
/ data/dl_food_classes_10_percent/train/steak/2197.jpg
/ data/dl_food_classes_10_percent/train/steak/2198.jpg
/ data/dl_food_classes_10_percent/train/steak/2199.jpg
/ data/dl_food_classes_10_percent/train/steak/2200.jpg
/ data/dl_food_classes_10_percent/train/steak/2201.jpg
/ data/dl_food_classes_10_percent/train/steak/2202.jpg
/ data/dl_food_classes_10_percent/train/steak/2203.jpg
/ data/dl_food_classes_10_percent/train/steak/2204.jpg
/ data/dl_food_classes_10_percent/train/steak/2205.jpg
/ data/dl_food_classes_10_percent/train/steak/2206.jpg
/ data/dl_food_classes_10_percent/train/steak/2207.jpg
/ data/dl_food_classes_10_percent/train/steak/2208.jpg
/ data/dl_food_classes_10_percent/train/steak/2209.jpg
/ data/dl_food_classes_10_percent/train/steak/2210.jpg
/ data/dl_food_classes_10_percent/train/steak/2211.jpg
/ data/dl_food_classes_10_percent/train/steak/2212.jpg
/ data/dl_food_classes_10_percent/train/steak/2213.jpg
/ data/dl_food_classes_10_percent/train/steak/2214.jpg
/ data/dl_food_classes_10_percent/train/steak/2215.jpg
/ data/dl_food_classes_10_percent/train/steak/2216.jpg
/ data/dl_food_classes_10_percent/train/steak/2217.jpg
/ data/dl_food_classes_10_percent/train/steak/2218.jpg
/ data/dl_food_classes_10_percent/train/steak/2219.jpg
/ data/dl_food_classes_10_percent/train/steak/2220.jpg
/ data/dl_food_classes_10_percent/train/steak/2221.jpg
/ data/dl_food_classes_10_percent/train/steak/2222.jpg
/ data/dl_food_classes_10_percent/train/steak/2223.jpg
/ data/dl_food_classes_10_percent/train/steak/2224.jpg
/ data/dl_food_classes_10_percent/train/steak/2225.jpg
/ data/dl_food_classes_10_percent/train/steak/2226.jpg
/ data/dl_food_classes_10_percent/train/steak/2227.jpg
/ data/dl_food_classes_10_percent/train/steak/2228.jpg
/ data/dl_food_classes_10_percent/train/steak/2229.jpg
/ data/dl_food_classes_10_percent/train/steak/2230.jpg
/ data/dl_food_classes_10_percent/train/steak/2231.jpg
/ data/dl_food_classes_10_percent/train/steak/2232.jpg
/ data/dl_food_classes_10_percent/train/steak/2233.jpg
/ data/dl_food_classes_10_percent/train/steak/2234.jpg
/ data/dl_food_classes_10_percent/train/steak/2235.jpg
/ data/dl_food_classes_10_percent/train/steak/2236.jpg
/ data/dl_food_classes_10_percent/train/steak/2237.jpg
/ data/dl_food_classes_10_percent/train/steak/2238.jpg
/ data/dl_food_classes_10_percent/train/steak/2239.jpg
/ data/dl_food_classes_10_percent/train/steak/2240.jpg
/ data/dl_food_classes_10_percent/train/steak/2241.jpg
/ data/dl_food_classes_10_percent/train/steak/2242.jpg
/ data/dl_food_classes_10_percent/train/steak/2243.jpg
/ data/dl_food_classes_10_percent/train/steak/2244.jpg
/ data/dl_food_classes_10_percent/train/steak/2245.jpg
/ data/dl_food_classes_10_percent/train/steak/2246.jpg
/ data/dl_food_classes_10_percent/train/steak/2247.jpg
/ data/dl_food_classes_10_percent/train/steak/2248.jpg
/ data/dl_food_classes_10_percent/train/steak/2249.jpg
/ data/dl_food_classes_10_percent/train/steak/2250.jpg
/ data/dl_food_classes_10_percent/train/steak/2251.jpg
/ data/dl_food_classes_10_percent/train/steak/2252.jpg
/ data/dl_food_classes_10_percent/train/steak/2253.jpg
/ data/dl_food_classes_10_percent/train/steak/2254.jpg
/ data/dl_food_classes_10_percent/train/steak/2255.jpg
/ data/dl_food_classes_10_percent/train/steak/2256.jpg
/ data/dl_food_classes_10_percent/train/steak/2257.jpg
/ data/dl_food_classes_10_percent/train/steak/2258.jpg
/ data/dl_food_classes_10_percent/train/steak/2259.jpg
/ data/dl_food_classes_10_percent/train/steak/2260.jpg
/ data/dl_food_classes_10_percent/train/steak/2261.jpg
/ data/dl_food_classes_10_percent/train/steak/2262.jpg
/ data/dl_food_classes_10_percent/train/steak/2263.jpg
/ data/dl_food_classes_10_percent/train/steak/2264.jpg
/ data/dl_food_classes_10_percent/train/steak/2265.jpg
/ data/dl_food_classes_10_percent/train/steak/2266.jpg
/ data/dl_food_classes_10_percent/train/steak/2267.jpg
/ data/dl_food_classes_10_percent/train/steak/2268.jpg
/ data/dl_food_classes_10_percent/train/steak/2269.jpg
/ data/dl_food_classes_10_percent/train/steak/2270.jpg
/ data/dl_food_classes_10_percent/train/steak/2271.jpg
/ data/dl_food_classes_10_percent/train/steak/2272.jpg
/ data/dl_food_classes_10_percent/train/steak/2273.jpg
/ data/dl_food_classes_10_percent/train/steak/2274.jpg
/ data/dl_food_classes_10_percent/train/steak/2275.jpg
/ data/dl_food_classes_10_percent/train/steak/2276.jpg
/ data/dl_food_classes_10_percent/train/steak/2277.jpg
/ data/dl_food_classes_10_percent/train/steak/2278.jpg
/ data/dl_food_classes_10_percent/train/steak/2279.jpg
/ data/dl_food_classes_10_percent/train/steak/2280.jpg
/ data/dl_food_classes_10_percent/train/steak/2281.jpg
/ data/dl_food_classes_10_percent/train/steak/2282.jpg
/ data/dl_food_classes_10_percent/train/steak/2283.jpg
/ data/dl_food_classes_10_percent/train/steak/2284.jpg
/ data/dl_food_classes_10_percent/train/steak/2285.jpg
/ data/dl_food_classes_10_percent/train/steak/2286.jpg
/ data/dl_food_classes_10_percent/train/steak/2287.jpg
/ data/dl_food_classes_10_percent/train/steak/2288.jpg
/ data/dl_food_classes_10_percent/train/steak/2289.jpg
/ data/dl_food_classes_10_percent/train/steak/2290.jpg
/ data/dl_food_classes_10_percent/train/steak/2291.jpg
/ data/dl_food_classes_10_percent/train/steak/2292.jpg
/ data/dl_food_classes_10_percent/train/steak/2293.jpg
/ data/dl_food_classes_10_percent/train/steak/2294.jpg
/ data/dl_food_classes_10_percent/train/steak/2295.jpg
/ data/dl_food_classes_10_percent/train/steak/2296.jpg
/ data/dl_food_classes_10_percent/train/steak/2297.jpg
/ data/dl_food_classes_10_percent/train/steak/2298.jpg
/ data/dl_food_classes_10_percent/train/steak/2299.jpg
/ data/dl_food_classes_10_percent/train/steak/2300.jpg
/ data/dl_food_classes_10_percent/train/steak/2301.jpg
/ data/dl_food_classes_10_percent/train/steak/2302.jpg
/ data/dl_food_classes_10_percent/train/steak/2303.jpg
/ data/dl_food_classes_10_percent/train/steak/2304.jpg
/ data/dl_food_classes_10_percent/train/steak/2305.jpg
/ data/dl_food_classes_10_percent/train/steak/2306.jpg
/ data/dl_food_classes_10_percent/train/steak/2307.jpg
/ data/dl_food_classes_10_percent/train/steak/2308.jpg
/ data/dl_food_classes_10_percent/train/steak/2309.jpg
/ data/dl_food_classes_10_percent/train/steak/2310.jpg
/ data/dl_food_classes_10_percent/train/steak/2311.jpg
/ data/dl_food_classes_10_percent/train/steak/2312.jpg
/ data/dl_food_classes_10_percent/train/steak/2313.jpg
/ data/dl_food_classes_10_percent/train/steak/2314.jpg
/ data/dl_food_classes_10_percent/train/steak/2315.jpg
/ data/dl_food_classes_10_percent/train/steak/2316.jpg
/ data/dl_food_classes_10_percent/train/steak/2317.jpg
/ data/dl_food_classes_10_percent/train/steak/2318.jpg
/ data/dl_food_classes_10_percent/train/steak/2319.jpg
/ data/dl_food_classes_10_percent/train/steak/2320.jpg
/ data/dl_food_classes_10_percent/train/steak/2321.jpg
/ data/dl_food_classes_10_percent/train/steak/2322.jpg
/ data/dl_food_classes_10_percent/train/steak/2323.jpg
/ data/dl_food_classes_10_percent/train/steak/2324.jpg
/ data/dl_food_classes_10_percent/train/steak/2325.jpg
/ data/dl_food_classes_10_percent/train/steak/2326.jpg
/ data/dl_food_classes_10_percent/train/steak/2327.jpg
/ data/dl_food_classes_10_percent/train/steak/2328.jpg
/ data/dl_food_classes_10_percent/train/steak/2329.jpg
/ data/dl_food_classes_10_percent/train/steak/2330.jpg
/ data/dl_food_classes_10_percent/train/steak/2331.jpg
/ data/dl_food_classes_10_percent/train/steak/2332.jpg
/ data/dl_food_classes_10_percent/train/steak/2333.jpg
/ data/dl_food_classes_10_percent/train/steak/2334.jpg
/ data/dl_food_classes_10_percent/train/steak/2335.jpg
/ data/dl_food_classes_10_percent/train/steak/2336.jpg
/ data/dl_food_classes_10_percent/train/steak/2337.jpg
/ data/dl_food_classes_10_percent/train/steak/2338.jpg
/ data/dl_food_classes_10_percent/train/steak/2339.jpg
/ data/dl_food_classes_10_percent/train/steak/2340.jpg
/ data/dl_food_classes_10_percent/train/steak/2341.jpg
/ data/dl_food_classes_10_percent/train/steak/2342.jpg
/ data/dl_food_classes_10_percent/train/steak/2343.jpg
/ data/dl_food_classes_10_percent/train/steak/2344.jpg
/ data/dl_food_classes_10_percent/train/steak/2345.jpg
/ data/dl_food_classes_10_percent/train/steak/2346.jpg
/ data/dl_food_classes_10_percent/train/steak/2347.jpg
/ data/dl_food_classes_10_percent/train/steak/2348.jpg
/ data/dl_food_classes_10_percent/train/steak/2349.jpg
/ data/dl_food_classes_10_percent/train/steak/2350.jpg
/ data/dl_food_classes_10_percent/train/steak/2351.jpg
/ data/dl_food_classes_10_percent/train/steak/2352.jpg
/ data/dl_food_classes_10_percent/train/steak/2353.jpg
/ data/dl_food_classes_10_percent/train/steak/2354.jpg
/ data/dl_food_classes_10_percent/train/steak/2355.jpg
/ data/dl_food_classes_10_percent/train/steak/2356.jpg
/ data/dl_food_classes_10_percent/train/steak/2357.jpg
/ data/dl_food_classes_10_percent/train/steak/2358.jpg
/ data/dl_food_classes_10_percent/train/steak/2359.jpg
/ data/dl_food_classes_10_percent/train/steak/2360.jpg
/ data/dl_food_classes_10_percent/train/steak/2361.jpg
/ data/dl_food_classes_10_percent/train/steak/2362.jpg
/ data/dl_food_classes_10_percent/train/steak/2363.jpg
/ data/dl_food_classes_10_percent/train/steak/2364.jpg
/ data/dl_food_classes_10_percent/train/steak/2365.jpg
/ data/dl_food_classes_10_percent/train/steak/2366.jpg
/ data/dl_food_classes_10_percent/train/steak/2367.jpg
/ data/dl_food_classes_10_percent/train/steak/2368.jpg
/ data/dl_food_classes_10_percent/train/steak/2369.jpg
/ data/dl_food_classes_10_percent/train/steak/2370.jpg
/ data/dl_food_classes_10_percent/train/steak/2371.jpg
/ data/dl_food_classes_10_percent/train/steak/2372.jpg
/ data/dl_food_classes_10_percent/train/steak/2373.jpg
/ data/dl_food_classes_10_percent/train/steak/2374.jpg
/ data/dl_food_classes_10_percent/train/steak/2375.jpg
/ data/dl_food_classes_10_percent/train/steak/2376.jpg
/ data/dl_food_classes_10_percent/train/steak/2377.jpg
/ data/dl_food_classes_10_percent/train/steak/2378.jpg
/ data/dl_food_classes_10_percent/train/steak/2379.jpg
/ data/dl_food_classes_10_percent/train/steak/2380.jpg
/ data/dl_food_classes_10_percent/train/steak/2381.jpg
/ data/dl_food_classes_10_percent/train/steak/2382.jpg
/ data/dl_food_classes_10_percent/train/steak/2383.jpg
/ data/dl_food_classes_10_percent/train/steak/2384.jpg
/ data/dl_food_classes_10_percent/train/steak/2385.jpg
/ data/dl_food_classes_10_percent/train/steak/2386.jpg
/ data/dl_food_classes_10_percent/train/steak/2387.jpg
/ data/dl_food_classes_10_percent/train/steak/2388.jpg
/ data/dl_food_classes_10_percent/train/steak/2389.jpg
/ data/dl_food_classes_10_percent/train/steak/2390.jpg
/ data/dl_food_classes_10_percent/train/steak/2391.jpg
/ data/dl_food_classes_10_percent/train/steak/2392.jpg
/ data/dl_food_classes_10_percent/train/steak/2393.jpg
/ data/dl_food_classes_10_percent/train/steak/2394.jpg
/ data/dl_food_classes_10_percent/train/steak/2395.jpg
/ data/dl_food_classes_10_percent/train/steak/2396.jpg
/ data/dl_food_classes_10_percent/train/steak/2397.jpg
/ data/dl_food_classes_10_percent/train/steak/2398.jpg
/ data/dl_food_classes_10_percent/train/steak/2399.jpg
/ data/dl_food_classes_10_percent/train/steak/2400.jpg
/ data/dl_food_classes_10_percent/train/steak/2401.jpg
/ data/dl_food_classes_10_percent/train/steak/2402.jpg
/ data/dl_food_classes_10_percent/train/steak/2403.jpg
/ data/dl_food_classes_10_percent/train/steak/2404.jpg
/ data/dl_food_classes_10_percent/train/steak/2405.jpg
/ data/dl_food_classes_10_percent/train/steak/2406.jpg
/ data/dl_food_classes_10_percent/train/steak/2407.jpg
/ data/dl_food_classes_10_percent/train/steak/2408.jpg
/ data/dl_food_classes_10_percent/train/steak/2409.jpg
/ data/dl_food_classes_10_percent/train/steak/2410.jpg
/ data/dl_food_classes_10_percent/train/steak/2411.jpg
/ data/dl_food_classes_10_percent/train/steak/2412.jpg
/ data/dl_food_classes_10_percent/train/steak/2413.jpg
/ data/dl_food_classes_10_percent/train/steak/2414.jpg
/ data/dl_food_classes_10_percent/train/steak/2415.jpg
/ data/dl_food_classes_10_percent/train/steak/2416.jpg
/ data/dl_food_classes_10_percent/train/steak/2417.jpg
/ data/dl_food_classes_10_percent/train/steak/2418.jpg
/ data/dl_food_classes_10_percent/train/steak/2419.jpg
/ data/dl_food_classes_10_percent/train/steak/2420.jpg
/ data/dl_food_classes_10_percent/train/steak/2421.jpg
/ data/dl_food_classes_10_percent/train/steak/2422.jpg
/ data/dl_food_classes_10_percent/train/steak/2423.jpg
/ data/dl_food_classes_10_percent/train/steak/2424.jpg
/ data/dl_food_classes_10_percent/train/steak/2425.jpg
/ data/dl_food_classes_10_percent/train/steak/2426.jpg
/ data/dl_food_classes_10_percent/train/steak/2427.jpg
/ data/dl_food_classes_10_percent/train/steak/2428.jpg
/ data/dl_food_classes_10_percent/train/steak/2429.jpg
/ data/dl_food_classes_10_percent/train/steak/2430.jpg
/ data/dl_food_classes_10_percent/train/steak/2431.jpg
/ data/dl_food_classes_10_percent/train/steak/2432.jpg
/ data/dl_food_classes_10_percent/train/steak/2433.jpg
/ data/dl_food_classes_10_percent/train/steak/2434.jpg
/ data/dl_food_classes_10_percent/train/steak/2435.jpg
/ data/dl_food_classes_10_percent/train/steak/2436.jpg
/ data/dl_food_classes_10_percent/train/steak/2437.jpg
/ data/dl_food_classes_10_percent/train/steak/2438.jpg
/ data/dl_food_classes_10_percent/train/steak/2439.jpg
/ data/dl_food_classes_10_percent/train/steak/2440.jpg
/ data/dl_food_classes_10_percent/train/steak/2441.jpg
/ data/dl_food_classes_10_percent/train/steak/2442.jpg
/ data/dl_food_classes_10_percent/train/steak/2443.jpg
/ data/dl_food_classes_10_percent/train/steak/2444.jpg
/ data/dl_food_classes_10_percent/train/steak/2445.jpg
/ data/dl_food_classes_10_percent/train/steak/2446.jpg
/ data/dl_food_classes_10_percent/train/steak/2447.jpg
/ data/dl_food_classes_10_percent/train/steak/2448.jpg
/ data/dl_food_classes_10_percent/train/steak/2449.jpg
/ data/dl_food_classes_10_percent/train/steak/2450.jpg
/ data/dl_food_classes_10_percent/train/steak/2451.jpg
/ data/dl_food_classes_10_percent/train/steak/2452.jpg
/ data/dl_food_classes_10_percent/train/steak/2453.jpg
/ data/dl_food_classes_10_percent/train/steak/2454.jpg
/ data/dl_food_classes_10_percent/train/steak/2455.jpg
/ data/dl_food_classes_10_percent/train/steak/2456.jpg
/ data/dl_food_classes_10_percent/train/steak/2457.jpg
/ data/dl_food_classes_10_percent/train/steak/2458.jpg
/ data/dl_food_classes_10_percent/train/steak/2459.jpg
/ data/dl_food_classes_10_percent/train/steak/2460.jpg
/ data/dl_food_classes_10_percent/train/steak/2461.jpg
/ data/dl_food_classes_10_percent/train/steak/2462.jpg
/ data/dl_food_classes_10_percent/train/steak/2463.jpg
/ data/dl_food_classes_10_percent/train/steak/2464.jpg
/ data/dl_food_classes_10_percent/train/steak/2465.jpg
/ data/dl_food_classes_10_percent/train/steak/2466.jpg
/ data/dl_food_classes_10_percent/train/steak/2467.jpg
/ data/dl_food_classes_10_percent/train/steak/2468.jpg
/ data/dl_food_classes_10_percent/train/steak/2469.jpg
/ data/dl_food_classes_10_percent/train/steak/2470.jpg
/ data/dl_food_classes_10_percent/train/steak/2471.jpg
/ data/dl_food_classes_10_percent/train/steak/2472.jpg
/ data/dl_food_classes_10_percent/train/steak/2473.jpg
/ data/dl_food_classes_10_percent/train/steak/2474.jpg
/ data/dl_food_classes_10_percent/train/steak/2475.jpg
/ data/dl_food_classes_10_percent/train/steak/2476.jpg
/ data/dl_food_classes_10_percent/train/steak/2477.jpg
/ data/dl_food_classes_10_percent/train/steak/2478.jpg
/ data/dl_food_classes_10_percent/train/steak/2479.jpg
/ data/dl_food_classes_10_percent/train/steak/2480.jpg
/ data/dl_food_classes_10_percent/train/steak/2481.jpg
/ data/dl_food_classes_10_percent/train/steak/2482.jpg
/ data/dl_food_classes_10_percent/train/steak/2483.jpg
/ data/dl_food_classes_10_percent/train/steak/2484.jpg
/ data/dl_food_classes_10_percent/train/steak/2485.jpg
/ data/dl_food_classes_10_percent/train/steak/2486.jpg
/ data/dl_food_classes_10_percent/train/steak/2487.jpg
/ data/dl_food_classes_10_percent/train/steak/2488.jpg
/ data/dl_food_classes_10_percent/train/steak/2489.jpg
/ data/dl_food_classes_10_percent/train/steak/2490.jpg
/ data/dl_food_classes_10_percent/train/steak/2491.jpg
/ data/dl_food_classes_10_percent/train/steak/2492.jpg
/ data/dl_food_classes_10_percent/train/steak/2493.jpg
/ data/dl_food_classes_10_percent/train/steak/2494.jpg
/ data/dl_food_classes_10_percent/train/steak/2495.jpg
/ data/dl_food_classes_10_percent/train/steak/2496.jpg
/ data/dl_food_classes_10_percent/train/steak/2497.jpg
/ data/dl_food_classes_10_percent/train/steak/2498.jpg
/ data/dl_food_classes_10_percent/train/steak/2499.jpg
/ data/dl_food_classes_10_percent/train/steak/2500.jpg
```

```
train_data_10_10_file_paths_series = [x.replace(dl_food_classes_10_percent/train/,) for x in train_data_10_10_file_paths]
```

```
/bin/sh: 1: cd: can'tcd /content/drive/MyDrive/tensorflow_course/extras/datasets/: No such file or directory
```

```
/bin/sh: 1: cd: can'tcd /content/drive/MyDrive/tensorflow_course/extras/datasets/: No such file or directory
```

```
# get the filenames of all of test data
test_data = []
for filepath in test_data_10_10_file_paths:
    test_data.append(filepath.replace('/content/drive/MyDrive/tensorflow_course/extras/datasets/',))
print(test_data)
```

```
['dl_food_classes_10_percent/test/sushi/1000.jpg',
 'dl_food_classes_10_percent/test/sushi/1001.jpg',
 'dl_food_classes_10_percent/test/sushi/1002.jpg',
 'dl_food_classes_10_percent/test/sushi/1003.jpg',
 'dl_food_classes_10_percent/test/sushi/1004.jpg',
 'dl_food_classes_10_percent/test/sushi/1005.jpg',
 'dl_food_classes_10_percent/test/sushi/1006.jpg',
 'dl_food_classes_10_percent/test/sushi/1007.jpg',
 'dl_food_classes_10_percent/test/sushi/1008.jpg',
 'dl_food_classes_10_percent/test/sushi/1009.jpg',
 'dl_food_classes_10_percent/test/sushi/1010.jpg',
 'dl_food_classes_10_percent/test/sushi/1011.jpg',
 'dl_food_classes_10_percent/test/sushi/1012.jpg',
 'dl_food_classes_10_percent/test/sushi/1013.jpg',
 'dl_food_classes_10_percent/test/sushi/1014.jpg',
 'dl_food_classes_10_percent/test/sushi/1015.jpg',
 'dl_food_classes_10_percent/test/sushi/1016.jpg',
 'dl_food_classes_10_percent/test/sushi/1017.jpg',
 'dl_food_classes_10_percent/test/sushi/1018.jpg',
 'dl_food_classes_10_percent/test/sushi/1019.jpg',
 'dl_food_classes_10_percent/test/steak/2000.jpg',
 'dl_food_classes_10_percent/test/steak/2001.jpg',
 'dl_food_classes_10_percent/test/steak/2002.jpg',
 'dl_food_classes_10_percent/test/steak/2003.jpg',
 'dl_food_classes_10_percent/test/steak/2004.jpg',
 'dl_food_classes_10_percent/test/steak/2005.jpg',
 'dl_food_classes_10_percent/test/steak/2006.jpg',
 'dl_food_classes_10_percent/test/steak/2007.jpg',
 'dl_food_classes_10_percent/test/steak/2008.jpg',
 'dl_food_classes_10_percent/test/steak/2009.jpg',
 'dl_food_classes_10_percent/test/steak/2010.jpg',
 'dl_food_classes_10_percent/test/steak/2011.jpg',
 'dl_food_classes_10_percent/test/steak/2012.jpg',
 'dl_food_classes_10_percent/test/steak/2013.jpg',
 'dl_food_classes_10_percent/test/steak/2014.jpg',
 'dl_food_classes_10_percent/test/steak/2015.jpg',
 'dl_food_classes_10_percent/test/steak/2016.jpg',
 'dl_food_classes_10_percent/test/steak/2017.jpg',
 'dl_food_classes_10_percent/test/steak/2018.jpg',
 'dl_food_classes_10_percent/test/steak/2019.jpg',
 'dl_food_classes_10_percent/test/pizza/1000.jpg',
 'dl_food_classes_10_percent/test/pizza/1001.jpg',
 'dl_food_classes_10_percent/test/pizza/1002.jpg',
 'dl_food_classes_10_percent/test/pizza/1003.jpg',
 'dl_food_classes_10_percent/test/pizza/1004.jpg',
 'dl_food_classes_10_percent/test/pizza/1005.jpg',
 'dl_food_classes_10_percent/test/pizza/1006.jpg',
 'dl_food_classes_10_percent/test/pizza/1007.jpg',
 'dl_food_classes_10_percent/test/pizza/1008.jpg',
 'dl_food_classes_10_percent/test/pizza/1009.jpg',
 'dl_food_classes_10_percent/test/pizza/1010.jpg',
 'dl_food_classes_10_percent/test/pizza/1011.jpg',
 'dl_food_classes_10_percent/test/pizza/1012.jpg',
 'dl_food_classes_10_percent/test/pizza/1013.jpg',
 'dl_food_classes_10_percent/test/pizza/1014.jpg',
 'dl_food_classes_10_percent/test/pizza/1015.jpg',
 'dl_food_classes_10_percent/test/pizza/1016.jpg',
 'dl_food_classes_10_percent/test/pizza/1017.jpg',
 'dl_food_classes_10_percent/test/pizza/1018.jpg',
 'dl_food_classes_10_percent/test/pizza/1019.jpg']
```

```
# get the number of test data
len(test_data)
```

```
2500
```

```
# get the predictions of each test image
for filepath in test_data:
    print(filepath,model_10_10_percent.predict(prepare_image(filepath,224,True)).argmax())
```

```
dl_food_classes_10_percent/test/sushi/1000.jpg 0
dl_food_classes_10_percent/test/sushi/1001.jpg 0
dl_food_classes_10_percent/test/sushi/1002.jpg 0
dl_food_classes_10_percent/test/sushi/1003.jpg 0
dl_food_classes_10_percent/test/sushi/1004.jpg 0
dl_food_classes_10_percent/test/sushi/1005.jpg 0
dl_food_classes_10_percent/test/sushi/1006.jpg 0
dl_food_classes_10_percent/test/sushi/1007.jpg 0
dl_food_classes_10_percent/test/sushi/1008.jpg 0
dl_food_classes_10_percent/test/sushi/1009.jpg 0
dl_food_classes_10_percent/test/sushi/1010.jpg 0
dl_food_classes_10_percent/test/sushi/1011.jpg 0
dl_food_classes_10_percent/test/sushi/1012.jpg 0
dl_food_classes_10_percent/test/sushi/1013.jpg 0
dl_food_classes_10_percent/test/sushi/1014.jpg 0
dl_food_classes_10_percent/test/sushi/1015.jpg 0
dl_food_classes_10_percent/test/sushi/1016.jpg 0
dl_food_classes_10_percent/test/sushi/1017.jpg 0
dl_food_classes_10_percent/test/sushi/1018.jpg 0
dl_food_classes_10_percent/test/sushi/1019.jpg 0
dl_food_classes_10_percent/test/steak/2000.jpg 1
dl_food_classes_10_percent/test/steak/2001.jpg 1
dl_food_classes_10_percent/test/steak/2002.jpg 1
dl_food_classes_10_percent/test/steak/2003.jpg 1
dl_food_classes_10_percent/test/steak/2004.jpg 1
dl_food_classes_10_percent/test/steak/2005.jpg 1
dl_food_classes_10_percent/test/steak/2006.jpg 1
dl_food_classes_10_percent/test/steak/2007.jpg 1
dl_food_classes_10_percent/test/steak/2008.jpg 1
dl_food_classes_10_percent/test/steak/2009.jpg 1
dl_food_classes_10_percent/test/steak/2010.jpg 1
dl_food_classes_10_percent/test/steak/2011.jpg 1
dl_food_classes_10_percent/test/steak/2012.jpg 1
dl_food_classes_10_percent/test/steak/2013.jpg 1
dl_food_classes_10_percent/test/steak/2014.jpg 1
dl_food_classes_10_percent/test/steak/2015.jpg 1
dl_food_classes_10_percent/test/steak/2016.jpg 1
dl_food_classes_10_percent/test/steak/2017.jpg 1
dl_food_classes_10_percent/test/steak/2018.jpg 1
dl_food_classes_10_percent/test/steak/2019.jpg 1
dl_food_classes_10_percent/test/pizza/1000.jpg 2
dl_food_classes_10_percent/test/pizza/1001.jpg 2
dl_food_classes_10_percent/test/pizza/1002.jpg 2
dl_food_classes_10_percent/test/pizza/1003.jpg 2
dl_food_classes_10_percent/test/pizza/1004.jpg 2
dl_food_classes_10_percent/test/pizza/1005.jpg 2
dl_food_classes_10_percent/test/pizza/1006.jpg 2
dl_food_classes_10_percent/test/pizza/1007.jpg 2
dl_food_classes_10_percent/test/pizza/1008.jpg 2
dl_food_classes_10_percent/test/pizza/1009.jpg 2
dl_food_classes_10_percent/test/pizza/1010.jpg 2
dl_food_classes_10_percent/test/pizza/1011.jpg 2
dl_food_classes_10_percent/test/pizza/1012.jpg 2
dl_food_classes_10_percent/test/pizza/1013.jpg 2
dl_food_classes_10_percent/test/pizza/1014.jpg 2
dl_food_classes_10_percent/test/pizza/1015.jpg 2
dl_food_classes_10_percent/test/pizza/1016.jpg 2
dl_food_classes_10_percent/test/pizza/1017.jpg 2
dl_food_classes_10_percent/test/pizza/1018.jpg 2
dl_food_classes_10_percent/test/pizza/1019.jpg 2
```

```
# get the number of test data predicted on
len(model_10_10_percent.predict(prepare_image(test_data[0],224,True)).argmax())
len(model_10_10_percent.predict(prepare_image(test_data[1],224,True)).argmax())
```

```
2500
2500
```

```
# create lists of the test image filenames
image_filenames = []
for filepath in test_data:
    image_filenames.append(filepath.replace('dl_food_classes_10_percent/test/',))
# get the predictions
pred_probs = model_10_10_percent.predict(prepare_image(test_data[0],224,True))
print(pred_probs.shape)
print(pred_probs[0])
```

```
(2500,)
[0.0000000]
```

```
# create dataframe of filenames and predictions
pred_df = pd.DataFrame(image_filenames,pred_probs.argmax())
pred_df.head()
```

	0
0	dl_food_classes_10_percent/test/sushi/1000.jpg
0	dl_food_classes_10_percent/test/sushi/1001.jpg
0	dl_food_classes_10_percent/test/sushi/1002.jpg
0	dl_food_classes_10_percent/test/sushi/1003.jpg
0	dl_food_classes_10_percent/test/sushi/1004.jpg

```
# add the prediction column
pred_df['pred_class'] = pred_df[1].apply(lambda x: class_names[x])
pred_df.head()
```

	0	1
0	dl_food_classes_10_percent/test/sushi/1000.jpg	0
0	dl_food_classes_10_percent/test/sushi/1001.jpg	0
0	dl_food_classes_10_percent/test/sushi/1002.jpg	0
0	dl_food_classes_10_percent/test/sushi/1003.jpg	0
0	dl_food_classes_10_percent/test/sushi/1004.jpg	0

```
# add the actual class
pred_df['actual_class'] = pred_df[0].apply(lambda x: x.split('/')[-2])
pred_df.head()
```

	0	1	pred_class
0	dl_food_classes_10_percent/test/sushi/1000.jpg	0	sushi
0	dl_food_classes_10_percent/test/sushi/1001.jpg	0	sushi
0	dl_food_classes_10_percent/test/sushi/1002.jpg	0	sushi
0	dl_food_classes_10_percent/test/sushi/1003.jpg	0	sushi
0	dl_food_classes_10_percent/test/sushi/1004.jpg	0	sushi

```
# add a column for if the prediction was correct
pred_df['pred_correct'] = pred_df[1] == pred_df[4]
pred_df.head()
```

	0	1	pred_class	actual_class
0	dl_food_classes_10_percent/test/sushi/1000.jpg	0	sushi	sushi
0	dl_food_classes_10_percent/test/sushi/1001.jpg	0	sushi	sushi
0	dl_food_classes_10_percent/test/sushi/1002.jpg	0	sushi	sushi
0	dl_food_classes_10_percent/test/sushi/1003.jpg	0	sushi	sushi
0	dl_food_classes_10_percent/test/sushi/1004.jpg	0	sushi	sushi

```
# add the number of correct predictions
pred_df.pred_correct.sum()
```

```
2500
```

```
# add the prediction probability
pred_df['pred_prob'] = pred_df[2]
pred_df.head()
```

	0	1	pred_class	actual_class	pred_correct
0	dl_food_classes_10_percent/test/sushi/1000.jpg	0	sushi	sushi	True
0	dl_food_classes_10_percent/test/sushi/1001.jpg	0	sushi	sushi	True
0	dl_food_classes_10_percent/test/sushi/1002.jpg	0