TATU Farg’ona Filiali **“Kompyuter injiniringi va sun’iy intellekt”** fakulteti 681.23-guruh talabasi Oribjonova Mubinabonuning **SUN’IY INTELLEKT ASOSLARI** fanidan 2-amaliy mashg’uloti

from keras.models import load\_model # TensorFlow is required for Keras to work

from PIL import Image, ImageOps # Install pillow instead of PIL

import numpy as np

# Disable scientific notation for clarity

np.set\_printoptions(suppress=True)

# Load the model

model = load\_model("keras\_Model.h5", compile=False)

# Load the labels

class\_names = open("labels.txt", "r").readlines()

# Create the array of the right shape to feed into the keras model

# The 'length' or number of images you can put into the array is

# determined by the first position in the shape tuple, in this case 1

data = np.ndarray(shape=(1, 224, 224, 3), dtype=np.float32)

# Replace this with the path to your image

image = Image.open("<IMAGE\_PATH>").convert("RGB")

# resizing the image to be at least 224x224 and then cropping from the center

size = (224, 224)

image = ImageOps.fit(image, size, Image.Resampling.LANCZOS)

# turn the image into a numpy array

image\_array = np.asarray(image)

# Normalize the image

normalized\_image\_array = (image\_array.astype(np.float32) / 127.5) - 1

# Load the image into the array

data[0] = normalized\_image\_array

# Predicts the model

prediction = model.predict(data)

index = np.argmax(prediction)

class\_name = class\_names[index]

confidence\_score = prediction[0][index]

# Print prediction and confidence score

print("Class:", class\_name[2:], end="")

print("Confidence Score:", confidence\_score) 