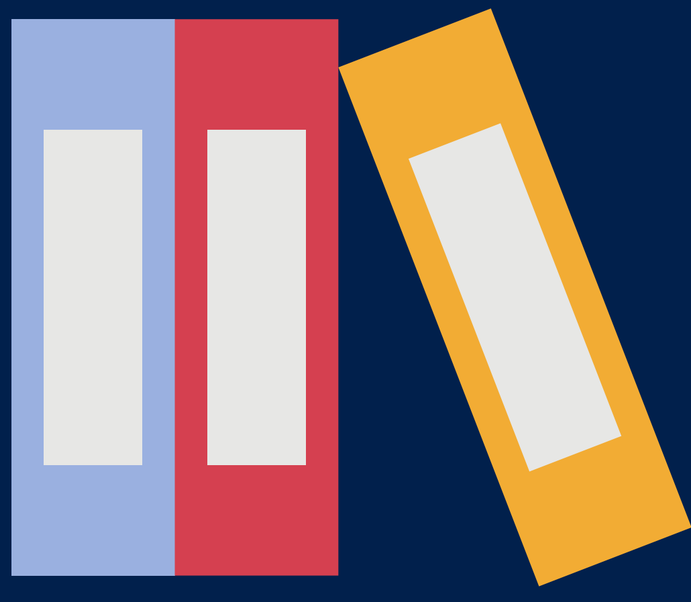
TURKISH LETTERS HANDWRITING RECOGNITION

Elif Nur Aslıhan Celepoğlu
1904010023

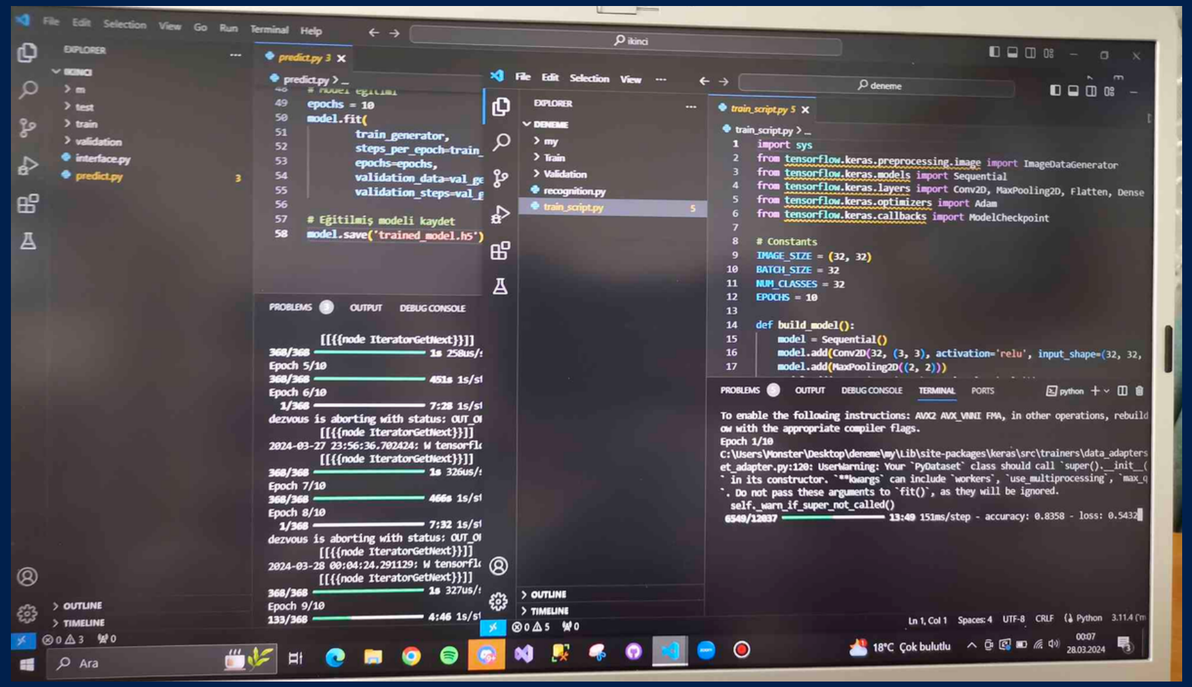
HOW DID I TRAIN MODEL?

I acquired a dataset consisting of 835,750 images encompassing 46 distinct characters, comprising both English and Turkish characters, numbers, and symbols. Utilizing the cv2 package, I processed the image contents to enhance computer comprehension and processing speed. Subsequently, leveraging the tensorflow and keras packages, I constructed a model for training on the dataset,

project link : https://github.com/elif1906/src_5_2_hand/tree/main



TRAINING PROCESS



We use Conv2D layers for image filtering and MaxPooling for value reduction and size consistency. Increasing depth enhances focus on finer details. Flattening yields a single pattern array, followed by a Dense layer for compression and another for outputting class predictions. We compile with Adam optimization for efficiency. Using ImageDataGenerators, we feed data and await results.

TESTING PROCESS

Assigning labels with corresponding indexes, we prompt the user for an image path. We then feed this path to the model to obtain a list of predictions with individual character accuracies. Filtering the maximum accuracy among them determines the predicted letter.