

Playing Cards Detection

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Basel:

Phase 1:

- Collect The Data & Labelling them
 - About 90 images with different locations, angles, combinations
 - Labelling them through different platforms like (makesense.ai, and roboflow)
- Try to build the model using colab
 - Trained the model on 2K of data, but the accuracy of the model is not good enough
 - Tried to train the model with 25K of data, but the session crashed. I couldn't train on this platform a good model
- Handle some test cases, such as:
 - When there are 2 cards with 2 detections, should count them as 2
 - When there are 2 detections for the same card, should count them as 1
- Write a code to write the results on the screen in a clean way
 - about 100 lines of code.
 - take the results from the terminal and clean the output
 - save the output into a variable
 - separate the detection by the type of the card (H, D, S, C)
 - write the results on the screen using cv2.

Phase 2:

- Write the code for the Tarneeb game in a separate file
 - The code for the game has been written from scratch by me.
 - Approximately 105 lines of code.
 - Pure python, has not been connected to the detect.py file yet
- Connect the traneeb code with the detect.py file:
 - Must be done some changes to the code to be compatible with the detection code
 - take the detections and send them to the tarneeb game
- Write the result on the screen in a clean and beautiful way
 - Different way from phase 1
 - The outputs are the playing cards from all 4 players
- Solve the problem that the result keeps blinking and make them stable on the screen
 - In phase 1, there was a problem that the results on the screen are keep blinking, so I solve this problem
- Handle a test case, where the player could take back the card, so the program should not count it.
 - This is a big and hard problem for us, but I solve it creatively.
- Trying to deploy the model using streamlit as a web-based application
 - It was a very hard thing
 - Couldn't know how to connect the input from the web application with the detect code and stream the results online.