Playing Cards Detection

Team: Basel and Osama

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.

Osama:

Phase 1:

- Image Labeling Using Roboflow
- Trying To Train the Model Using Colab And Tensorflow
- Use Cases Testing

Phase 2:

- Use Case Testing