Coding Assignments

Assignment 1

Write a program for segregating files into different folders

Given a folder with image and text files, segregate images and text files into two different folders.

See “Assignment_1” folder.

Assignment 2

Write a program for calculating statistics

Given two excel files (gt.xlsx and pred.xlsx)

- Read content from them
- Compare ground truth (GT) and predicted (PRED) columns
- Calculate below statistics:
    - Accuracy: defined as total number of correct characters divided by total number of characters in ground truth file
    - Total number of lines in the excel file – only GT column
    - Total number of characters in ground truth file – only GT column
- Write above stats in an output.xlsx file

Please write code such that the two input excel files (gt.xlsx and pred.xlsx) and output excel file (output.xlsx) file should be given as arguments to python file.

To compare strings, you may use GitHub - kahne/fastwer: A PyPI package for fast word/character error rate (WER/CER) calculation

Please note the pred.xlsx may have jumbled rows compared to gt.xlsx.

See “Assignment_2” folder.

Assignment 3

Develop a solution for detecting a face in a live web camera feed

Tasks:

- Read frames from a web camera
- Run a face detector on each frame and show bounding boxes on the frame
- Display them in a window, show frame numbers on the frame, save video to disk with bounding box(es)

You may use any existing face detector.

Bonus: Do with multiprocessing in Python

Write comments in the code so that the code is self-explanatory.

Expected time to complete: 1 Week

The candidate needs to submit Python codes, which will be tested by interview panel. If required there will be a one-to-one session.