Take-Home Exercises

Exercise 1 - Hero Name Recognition

League of Legends: Wild Rift (a.k.a Wild Rift) is an mutiplayer online battle arena game developed by Riot Games. In the highlight moment detection systems, it is important to recognize the hero appearing on the message bar when a battle happens.

For example:

Image	Hero name
	Ahri
	Ashe

In this exercise, you need to write a program in Python to predict the hero names on the left side of the message bar. For testing, we will give you a test dataset that includes:

- `hero_names.txt`: All hero names of Wild Rift.
- `test_images/`: image for testing.
- `test.txt`: groundtruth of each image in test_iamges/ folder. Each record in this file has the format: `<input_filename> <hero_name>`.

Besides, all image sources for heroes you can find on the official page of Wild Rift (here).

***Requirements*:**

- Your program gets the input as the path to test_images/ folder and outputs a file (i.e: output.txt) that is similar to test.txt in our dataset. Each record in the output file shows your prediction for each sample image.
- Describe briefly your solution in a report (i.e: your pipeline, algorithms that we use, remaining problem as well as ideas for improvements,...).
- Your solution will be evaluated on our private dataset. So, you need to submit your source and the report.
- Do not forget to write a README.md (i.e: environment requirements, how to run) to guide us to reproduce your code easily.

Exercise 2 - Highlight Moment Detection System

Nowadays, there are a lot of streams that were lived on the internet. Automatically capturing somes highlight moments in that streams and sharing them on social media platforms is necessary. In this exercise, you are requested to propose your ideas for capturing goal moments in FIFA 23. Some links bellow are useful:

- https://www.twitch.tv/directory/game/FIFA%2023/videos/all
- https://www.twitch.tv/videos/1745776472
- https://www.twitch.tv/kaicenat/clip/TolerantEphemeralGorillaNononoCat-YCnbHd9sKnEHSTaI

Requirements:

- Proposes your ideas and describes them in a report (i.e: your pipeline, algorithms,...).
- Try to analyze the problem that we can face and how to solve them.