ANALYZING ROULETTE THROUGH ML

(STILL BUILDING THIS DOCUMENT, TOMORROW WILL BE COMPLETED :))

- Summary:

The goal is to create a kind of “tool” that given the first part of a roulette play it can predict what will happen, basically predict where it will land. For that the project is divided in two parts: an analysis algorithm and a neural network. The first one is mainly related to Computer Vision and algorithm coding as well as data storage, while the second one is purely related with the creation of a neural network capable of learning about the data. In the following lines I will try to explain how I approached each part and the progress that I have already done.

1-ANALYZING ALGORITHM:

This part can also be divided into 3 other parts. All 3 parts use the **Open-CV** library as the basis and all of them (mainly the analyzer ones) are composed of a little bit complex functions.

1.1 Video divider

By using object detection, the algorithm can receive a large video with several roulette games, and divide it into several video pairs. These pairs are composed of what can be called the input video (where the ball is rolling in the outer part) and the output video (where the ball is moving in the inner part and lands finally on a number). The output one has a black fill applied to the white parts of the outer part, you’ll see why.

1.2 Input analyzer

This serie of functions and code lines get information from the input video.

1.3 Output analyzer

This se