Title: Color Detection

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Color detection is the process of detecting the name of any color. In this project, the plan is to map the color of lights with their respective names to allow the application to be able to detect the right colors.

Background

The idea is to build an application that is able to obtain the color of any and every image given as input. The project involves using panda to help the application control and manipulate the data to help in the color detection. An important use of panda in this project is to aid with the handling of the large CSV files and manipulating the contents received by the application to be able to obtain the intended result. The human eyes and brain work together to convert the light to color and then the brain makes an observation as to what color the light is. The brain is able to map the certain lights with their color names because from childhood the brain has been trying to map light colors to light names. The computer doesn’t have that luxury of growing up so we will provide the application with color dataset.

Challenge

The challenge associated with this project involves identifying the colors from the data file that contains the color names and values and evaluating the distance from each color and finding the shortest one. A color can be defined in 16.5 million ways. The difficulty is to be able to identify any of these colors in any of the ways they are represented.

GOALS AND DELIVERABLES

Goals:

1. Develop the functionality to be allow for the application to accept inputs of images to be used and be able to access CSV files with the help of pandas
2. Set a mouse callback event on a window.
3. Create a properly functioning draw function.
4. Develop a function to obtain the distance for a color name and display the image on the window.

SCHEDULE

Week of 2nd Feb

Daniel: Work on the functionality for obtaining user image input.

Henry: Obtain the dataset that will be used to represent the colors.

Phillip: Develop a mouse callback function.

Week of 9th Feb

Daniel: Work on the functionality for obtaining user image input.

Henry: Test cases for the mouse callback function.

Phillip: Develop the functionality for reading CSV files with the help of pandas.

Week of 23th Feb

Daniel: Test cases for the function developed.

Henry: Test cases for the function on obtaining user image input.

Phillip: Develop a draw function.

Week of 1st March

Daniel: Test cases for the function of reading CSV files.

Henry: Work on the draw function.

Phillip: Develop the functionality for reading CSV files with the help of pandas.

Week of 8th March

Daniel Develop a function that displays the image on the window.

Henry: Develop a function to obtain the distance to get the color name.

Phillip: Develop a function to obtain the distance to get the color name.

Week of 15th March

Daniel Develop a UML diagram.

Henry: Test case for displaying image on the window.

Phillip: Develop test cases for the function used to obtain the distance to get the color name.

Week of 22nd March

Daniel: Develop the functionality for a mouse callback event on a window.

Henry: Test Case for displaying image on the window.

Phillip: Develop test cases for the function used to obtain the distance to get the color name.

Week of 30th March

Daniel: Documentation on the functions Daniel developed.

Henry: Test cases for the mouse callback function.

Phillip: Documentation on the functions Daniel developed.

Week of 5th April

Daniel: Documentation on the functions Daniel developed.

Henry: Documentation on the functions Henry developed.

Phillip: Documentation on the functions Phillip developed.