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Christian Rodriguez Individual Contribution Page

Goal

The goal of the Floc Size and Count App sub-team is to develop a computer application that can be used with a camera to track changes in size and flock of water in the water treatment facilities. The application ought to be easy to use for the operators of this plant and be used to periodically collect data about the the plant or to find particular faults in the facility.

Plans

The primary objective of this semester is to create a functional prototype of the Floc App. This involves creating an aesthetically appealing graphical user interface (GUI) and incorporating several features that the team feels would be important to potential users. After this prototype of the software is done, we hope to run beta-tests with the assistance of other AguaClara sub-teams.

Fall 2016 Contributions

- Supplied comments to previous work, clarifying what each section of the code did
- Removed erroneous or unnecessary sections of code from previous work
- Organized controls and output into tabs with the assistance of Anthony
- Researched and implemented ways of viewing live video from a camera
- Implemented concurrent video-taking, image analysis, and timing through the use of multiple threads
- Incorporated the use of a queue to store images for analysis using Deniz's ideas
- Repaired a timing bug in the current prototype by splitting video acquisition and the storing of images for analysis into two separate threads

Spring 2016 Contributions

- Practiced using LabVIEW by creating a VI that converts Fahrenheit inputs to Celsius outputs().
- Created a program that converts user input for inches into centimeters and periodically adds the centimeter value to a chart for 100 seconds, terminating either after the 100 seconds have passed or when the user clicks the stop button.
- Researched on the creation of configuration files and practiced what I learned by creating a new vi
- Divided Casey Garland's source code into subvis in order to ease readability
- Conducted research and training on the creation of executables using LabVIEW