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Winter 2014 Capstone Proposal

# Pic-Pick Project Success

Have you ever wanted to improve some boring photo that you had taken? Do you want to customize an image to be your own? Pic-Pick is an application that identifies objects in an image of your choice and allows you to manipulate them to your preference. You will have the ability to change the color, shape and even the position of these objects to make any image your own.

# Target Users

This application is intended for the use of artists and designers of all professions and hobbies that look to alter and change existing images for their own. This application can be a good addition to the tools used for photo editing. The main purpose of this application is to be used to expand upon one’s artistic nature.

# Finished Product

This project will be coded in Java 7. When finished, the final product will have a GUI that will display the image(s) that the user uploaded within a window. This window will have a menu that lists the number of objects located within the image and order them by when they were found. Hovering over objects found in the image will highlight the outline of that image and likewise if one hovers over the object number found on the menu. Clicking on a highlighted object will bring forth another menu for the user to interact with. The menu for selecting an object will have the following options: a color wheel for changing colors, a space for changing the length and width of the object, a button to bring the image to the foreground or push it to the background. The user will be able to click and drag the selected object to reposition it within the image. There will be an option to copy the selected object. A copied object will be added to a third menu that the user could then use to cycle through previously copied objects and paste those objects to the image they are working with. The user will be able to save their changed images and load in new images.

# User Stories

1. User will be able to change the length and width of an object.
   * User will be able to see the object change as he/she adjusts the length.
   * User will be able to see the object change as he/she adjusts the width.
2. User will be able to change the color of objects.
   * User will be able to see the object’s color change when a color is picked.
3. User will be able to move an object to the front of an image or to the back.
   * User will be able to see the object move when he/she picks the orientation.
4. User will be able to save images.
   * User will be notified that the image was successfully saved.
5. User will be able to copy objects found in an image.
   * User will be able to see the objects that have been copied.
6. User will be able to paste copied objects to an image.
   * User will be able to see the objects that they have pasted.
7. User will be able to copy several different objects.
   * User will have a list of objects that they have copied
8. User will be able to move objects in an image.
   * User will see the movement of an object they are dragging.
9. User will be able to load an image quickly.
   * User will only have to wait 30 seconds to view an image.

# 2-Week Plan

Week One:

I plan to start with researching algorithms on image recognition first. After 2 to 3 days of research and testing example versions of the algorithm I plan to get right to work on the algorithm for the project. Tackling the ability to select the objects found in an image will be the next step. Getting ahold of the technically challenging part of the project first will be key to success.

* User will be able to select an object in an image.
* User will be notified that an object has been selected.

Week Two:

I plan to have made some progress and anticipate hurdles on the way to completing this algorithm. Next, I will be getting to work on uploading images and displaying them for the user to see. I’ll run the algorithm on this image and get to work on the manipulations that the user can do on the objects that are identified.

* User will be able to load more than one image.
* User will be notified that an image has been loaded.
* User will be able to change the length and width of an image.
* User will be able to see the image change when he/she adjusts the length and width of an image.