ENEE499 Project Proposal

GOAL: Create an automated image processing system with GUI that can detect colors, shapes, and potentially letters within an image and display output in a text box as well as outputting results to a text file.

# SCHEDULE:

## Phase 1: Research and Finalized Plan

1. JAN 25-31
   1. Research current image processing efforts as a platform for project
   2. Create revised semester plan and submit to Dr. Blankenship

## Phase 2: Shape Recognition

1. FEB 1-7
   1. Begin work on shape recognition
      1. Define shapes to do testing on
      2. Start writing code
2. FEB 8-14
   1. Continue work with shape recognition
      1. Continue writing code
3. FEB 15-21
   1. Continue work with shape recognition
      1. Continue writing code
4. FEB 22-28
   1. Finalize shape recognition program
      1. Test with shapes on high-contrast and low-contrast backgrounds
      2. Test with shapes with sharp corners as well as circles and half-circles

## Phase 3: Color Detection

1. MAR 1-7
   1. Create modified histogram formula that ignores background color (green)
2. MAR 8-14
   1. Begin writing mid-semester report
   2. Finish histogram formula
   3. Use histogram data to differentiate between shape color and letter color
3. MAR 15-21
   1. Complete mid-semester report
   2. Finalize color differentiation
4. MAR 22-28
   1. Polish output data format

## Phase 4: Text Output

1. MAR 29-APR 4
   1. Determine desired output and sketch initial format ideas
   2. Draft code for template output
2. APR 5-11
   1. Create layout for text box with automatic sizing of output areas and option to output to .txt file
3. APR 12-18
   1. Implement outputs from previous sections into textbox and format .txt file output for readability

## Phase 5: Automation

1. APR 19-25
   1. Create draft layout of GUI for completing each of the four prior processes individually and concurrently
   2. Create initial version of GUI with dead buttons to finalize layout
2. APR 26-MAY 2
   1. Implement functions to corresponding buttons
3. MAY 3-9
   1. Draft Final Paper
   2. Draft method for completing processes live
4. MAY 10-15
   1. Complete final paper
   2. Complete live processing method