

CSC443 Sprint 1 Report - Max Figura - 2025/03/06  
Group 7 Semester Project - Computer Vision

#### Tasks Completed

- Initialise Collaboration: Created GitLab project shared with group members
- Find GUI Library: Using PySide - Python bindings for Qt interface
- Construct Basic GUI: Created `user_interface.py` file with GUI window class
- Implement File Selection: Used `QFileDialog` to allow user to choose a file from their system
- Implement Color Selection: Used `QColorDialog` to allow user to select color

#### Tasks In Progress

- Create View-Model Controller: Created Main class with basic linkage to program functionality
- Improve Color Selection: Researched options for customising color picker
- Incorporate Program Functionalities to UI: Added contours and kernel size options

#### Tasks Pending

- Implement File Saving
- Construct Managed Image Cache
- Incorporate Color Range Selection

#### Challenges

- PySide does not have as extensive documentation as would be preferred. I am relying instead on various examples from the official site combined with inspection of what source code is available.
- `QColorDialog` is overly busy and does not have options to slim down to the necessary functionalities. While it is still serviceable, I plan to attempt to create a modified version of the class better suited to our purposes.
- The use of a GUI all but necessitates an event-based structure to the program. To keep some semblance of view-model segregation, controller `Main` dictates which model functionalities are assigned to view's events.

#### Outcomes

- All of `user_interface.py` - GUI class which includes user input ability and output display
- Most of `main.py` - Main driver which creates and assigns program functionalities into GUI instance

#### Resource Allocation

- 4.5 hours developing GUI
- 3 hours creating Main controller
- 2 hours learning PySide library
- 3.5 hours managing repository and updating documentation

#### Team Assessment

- Ariana - Researched concepts in computer vision and implementation within openCV. Began work on contour detection.
- Jason - Implemented basic color detection program and file reading/writing. Connected to GUI via **Main**.