CSC443 Sprint 2 Report - Max Figura - 2025/03/27
Group 7 Semester Project - Computer Vision

Tasks Completed

- Create View-Model Controller: Added stronger connecting functionality between view and model
- Improve Color Selection: Created custom slimmed-down color picker
- Implement File Saving: Created GUI-based functionality to save output to file with specified parameters
- Fix GUI Scaling: Resolved bug causing images to display too large
- Modify Opening Screen: Removed default-loaded images

Tasks In Progress

- Incorporate Color Range Selection: Discussed options for selecting and displaying color range

Tasks Pending

- Cache Folder Management
- Video Displaying and Processing

Challenges

- "Cached" image does not allow for best-quality file saving. Current setup involves a raw image structure being from the model through the GUI to be printed out to file.
- PySide's nature as a binding of the C++ Qt library means that there is no python source to selectively copy into a custom color picker. I instead found the C++ source and began translating selected portions into Python/PySide
- A sub-range of a three-dimensional colorspace is not intuitive to visualise. Two primary options for display of this selection are being considered - a set of discrete points that can be interpolated, and a continuous two-dimensional gradient selection.

Outcomes

- Further development to `user_interface.py`, including all save functionalities
- Some additions to `main.py`, mostly regarding increased functionalities
- Entirety of `gui_colorpicker.py` - Custom Qt widget copying some functionalities from QColorDialog

Resource Allocation

- 4 hours adding GUI functionalities
- 4 hours creating color picker
- 4 hours consulting and learning from source code and documentation
- 2 hours managing repository and updating documentation

Team Assessment

- Ariana - Made further developments to contour detection (had complicating circumstances that limited productivity)
- Jason - Added Gaussian blur with adjustable kernel size. Started three-dimensional colorspace visualisation.