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# Weekly Report No. 9

Artwork Super-resolution Scanning Application

4/10/2023 – 4/16/2023

**Isaac Plambeck • Reece Dodge • Samuel Schaphorst • Garrett Powell**

*Client/Advisor: Dr. Thomas Daniels*

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## Weekly Summary

This week, we continued working with Python and OpenCV image processing functions. Progress has especially been made with the pre-processing image setup features.

## Past Week Accomplishments

### As a Group

- Worked on different approaches to eliminating background color/making the background white in order to make border detection easier

### Isaac – *Software Development Lead*

- Made a better working crop and perspective correction algorithm

### Reece Dodge – *Project Lead*

- Worked on SIFT setup and manipulation

### Samuel Schaphorst – *Testing/Quality Assurance Lead*

- Worked further with Hough transform program and increased accuracy

### Garrett Powell – *Electrical Design Lead*

- A little work/research into noise reduction/median filters
- Became a little more familiar with applications for openCV

### *Pending Issues*

As a Group
- N/A

Isaac
- N/A

Reece
- N/A

Samuel
- N/A

Garrett
- N/A

## Individual Contributions

| *Team Member* | *Contributions* | *Hours - This Week* | *Hours - Cumulative* |
|---|---|---|---|
| *Isaac Plambeck*<br><br>*Software Development Lead* | • Worked on cropping and perspective change algorithm<br>• Working on background color change<br>• Continue idea testing for the app design | 6 | 42 |
| *Reece Dodge*<br><br>*Project Lead* | • Worked on SIFT | 3 | 28 |
| *Samuel Schaphorst*<br><br>*Testing/Quality Assurance Lead* | • Worked more with border detection program<br>• Began research on image stitching methods | 5 | 37 |
| *Garrett Powell* | • Noise reduction/median filters | 3 | 32 |

| *Electrical Design Lead* | • OpenCV familiarity | | |
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## Comments and Extended Discussion

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# Plans for the Upcoming Week

### As a Group

- Prepare the final presentation
- Update website
- Prepare final copy of design document

### Isaac

- Refine cropping algorithm for different color backgrounds OR continue to get a working algorithm for background color change.
- Work more with color detection and color correction (Pantone).

### Reece

- Further research SIFT and perspective crop's impact on image stitching

### Samuel

- Start using different image stitching commands and figure out which ones to use in the final product
- Look more into color correction with Pantone

### Garrett

- Keep looking into openCV to figure out different functions that could be useful for our application.
- Help prepare design document / final presentation

# Summary of Weekly Advisor Meeting

We did not hear from Dr. Daniels this week.