
Weekly Report No. 4

Artwork Super-resolution Scanning Application

2/19/2023 – 2/26/2023

Isaac Plambeck • Reece Dodge • Samuel Schaphorst • Garrett Powell

Client/Advisor: Dr. Thomas Daniels

Weekly Summary

- Became more familiar with using python and open cv commands.
- Created a website capable of letting a user upload an image. Once the image is uploaded it will be displayed on the user interface
- The user can also manually crop the image once the image is uploaded
- Began testing certain open cv functions that we may use in our final program
- Created a use case diagram to map out how our program will work

Past Week Accomplishments

As a Group

- Met with Dr Daniels in person and presented a problem statement, also discussed with Daniels an idea involving scanning an image on a stable axis

Isaac – *Software Development Lead*

- Created a python application that allows for file/photo uploading and photo cropping which will hold as the base program to continue to build off of. Uploaded the website to the live server. Met with Dr. Daniels and talked further about features wanted in the application.

Reece Dodge – *Project Lead*

- Continued to build and improve on the current ideation phase, where the main goal is to come up with ideas and figure out new directions to take

- Researched panoramic image processing

Samuel Schaphorst – *Test/Quality Control*

- Created a function in python that uses open cv commands to scan an uploaded image for its borders
- Met with Dr Daniels

Garrett Powell – *Electrical Engineering Lead*

- More Python review, focused on data/signal/image processing applications
- Basic research on different signal/image processing methods. Primarily correlation and match filters to assist with corner detection of multiple images.

Pending Issues

Isaac

- None

Reece

- None

Samuel

- Having trouble getting open cv installed on my mac

Garrett

- None

Individual Contributions

<i>Team Member</i>	<i>Contributions</i>	<i>Hours - This Week</i>	<i>Hours - Cumulative</i>
<i>Isaac Plambeck</i> <i>Software Development Lead</i>	<ul style="list-style-type: none"> • Built base application. Website updaing and uploading. 	10	17
<i>Reece Dodge</i> <i>Project Lead</i>	<ul style="list-style-type: none"> • Continued to build and improve on the current ideation phase, where the main goal is to come up with 	2	8

	<p>ideas and figure out new directions to take</p> <ul style="list-style-type: none"> • Researched panoramic image processing 		
<p>Samuel Schaphorst <i>Test/Quality Control</i></p>	<ul style="list-style-type: none"> • Became familiar with using open cv commands, and created a function that scans an image for the borders 	4	11
<p>Garrett Powell <i>Electrical Engineering Lead</i></p>	<ul style="list-style-type: none"> • More Python Review • Basic Research on Correlation and Match Filters 	3	10

Plans for the Upcoming Week

As a Group

- Continue updating the python application with more functions

Isaac

- Add multiple photo uploads.
- Work with perspective changing.
- Continue to meet with Dr. Daniels and maintain website.

Reece

- Learn the fundamentals of coding in Python

Samuel

- Figure out how to get open cv installed on my mac book
- Test my new function involving border detection and perfect it
- Implement a function that will find the corner of the image and zoom in

Garrett

- Continue reviewing python
- Focus on python applications of signal and image processing

- Look more into match filters and their applications within image processing

Use Case Diagram

