# CS543/ECE549 Assignment 1

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**Part 1 : Implementation Description**

Provide a brief description of your implemented solution, focusing especially on the more "non-trivial" or interesting parts of the solution.

What implementation choices did you make, and how did they affect **the** quality of the result and the speed of computation?

* What are some artifacts and/or limitations of your implementation, and what are possible reasons for them?

**Part 2: Basic Alignment Outputs**

For each of the 6 images, include channel offsets and output images. Replace <C1>, <C2>, <C3> appropriately with B, G, R depending on which you use as the base channel.

**A: Channel Offsets**

Using channel <C1> as base channel:

|  |  |  |
| --- | --- | --- |
| Image | <C2> (h,w) offset | <C3> (h,w) offset |
| 00125v.jpg |  |  |
| 00149v.jpg |  |  |
| 00153v.jpg |  |  |
| 00351v.jpg |  |  |
| 00398v.jpg |  |  |
| 01112v.jpg |  |  |

**B: Output Images**

Insert the aligned colorized outputs for each image below (in compressed jpeg format):

**Part 3: Multiscale Alignment Outputs**

For each of the 3 high resolution images, include channel offsets and output images. Replace <C1>, <C2>, <C3> appropriately with B, G, R depending on which you use as the base channel. You will also need to provide an estimate of running time improvement using this solution.

**A: Channel Offsets**

Using channel <C1> as base channel:

|  |  |  |
| --- | --- | --- |
| Image | <C2> (h,w) offset | <C3> (h,w) offset |
| 01047u.tif |  |  |
| 01657u.tif |  |  |
| 01861a.tif |  |  |

**B: Output Images**

Insert the aligned colorized outputs for each image below (in compressed jpeg format):

**C: Multiscale Running Time improvement**

Report improvement for the multiscale solution in terms of running time (feel free to use an estimate if the single-scale solution takes too long to run). For timing, you can use the python time module, as described in the assignment instructions.

**Part 4 : Bonus Improvements**

Post any extra credit details with outputs here.