

Week	Tasks	Checkpoints
<b>Community Bonding Period (April 20- May 17)</b>		
<b>May 18 - 31</b>	<ol style="list-style-type: none"> <li>1) Switch to using the converted SDSS DR10 Archive Server - familiarity with the API for SDSS <a href="http://data.sdss3.org/documentation">http://data.sdss3.org/documentation</a></li> <li>2) Generate Individual colored mosaic (g,r,i) manually; also u,z files but not mosaic-ed</li> <li>3) Fix the readfile.py to generate data in the desired output format.</li> <li>4) Solve the centering the galaxy (how to retrieve multiple images around the given RA,DEC coord and center the mosaic around it.)</li> </ol>	Checkpoint 1: Complete a scientifically-calibrated color image mosaic for a single galaxy
<b>June 1 - 15</b>	<ol style="list-style-type: none"> <li>1) Fine tune values in STIFF config file to optimize color image</li> <li>2) How to identify and deal with galaxies that are cutoff from the edges? What neighboring images should be retrieved for mosaic? Generic algorithm.</li> <li>3) Resolve issue of uncentered galaxies inherent to RC3 catalogue.</li> </ol>	
<b>June 16- 29 (June 27 Midterm Evaluation Deadline)</b>	<ol style="list-style-type: none"> <li>1) Resolve the radius issue</li> <li>2) Resolve STIFF issue for differing image height.</li> <li>3) Figure out a way to retrieve run, camcol, field given the RA,DEC value ?</li> <li>4) How to parse results from Coverage Check to Python form (i.e. how to record down the list of galaxies that don't lie in SDSS footprint without throwing an error?)</li> <li>5) Complete Paperwork for midterm evaluation</li> </ol>	Checkpoint 2: Generalized an algorithm for the whole mosaicing pipeline that works for all kinds of galaxies in the rc3
<b>July 1 - 13</b>	<ol style="list-style-type: none"> <li>1) Automating the mosaic-making process</li> <li>2) Writing Exception catches for common warnings and errors, ex. FileNotFoundError when server is down</li> <li>3) *Make use of other variables in rc3.txt for database?</li> <li>4) Start thinking about what to do for Web backend storage of resulting files</li> </ol>	Checkpoint 3: Completely Automated the mosaic-making process
<b>July 14 - 27</b>	<ol style="list-style-type: none"> <li>1) Building a searchable database that stores info about each galaxy in the RC3 as well as for backend storage of data</li> </ol>	
<b>July 28 - Aug 10</b>	<ol style="list-style-type: none"> <li>1) Building a search engine that queries the RC3 galaxies based on user-defined parameters (SQL-based?)</li> <li>2) Creating a GUI for search engine's front end</li> <li>3) * Expanding it to different datasets (other DSS, DES?)</li> <li>4) * Reduce image artifacts as noted in Hogg's RC3 (by using image quality flags in SDSS's data?)</li> </ol>	Checkpoint 4: Completed building a backend storage for Web display of data
<b>11 August:</b>	<p>Last stage:</p> <ol style="list-style-type: none"> <li>1) *Document and develop a pipeline for how to use this program for mosaic creation on rc3 galaxies in different future surveys and data sets</li> <li>2) * Link to interactive sky map from CAS SDSS Navigator tool or Aladin (VOTable XML file from STIFF?)</li> </ol>	Checkpoint 5: Finish documentation. Complete everything. Writing comprehensive tests and make sure things work.
<b>Aug 11- 22 (Aug 22 Final evaluation deadline)</b>	Submit final evaluation	
	<p>Labelled (*) means possible extensions for the project but it is not essential to making the project work. Will add more details to the later week plans as time progresses and when I have a clearer idea of the specifics of the next step. (Updates on GitHub: <a href="https://github.com/dorislee0309/workarea-rc3-project/blob/master/timeline.pdf">https://github.com/dorislee0309/workarea-rc3-project/blob/master/timeline.pdf</a>)</p>	