

### Work Breakdown Structure

0. Phone will use web browser/laptop web server. Browser will work on both iPhone and Android. Purchasing Mac hardware will not be needed (I have no access to a MacBook Pro). 99% of the project will be on Windows web server. Purchasing an Android device will not be needed (I have no access to an Android device). Learning curve of Xcode/Swift or Android development tools will not be needed.
1. Re-familiarize myself with recursive DFS.
2. Test if recursive DFS exceeds stack space.
3. Implement iterative DFS if recursive DFS does not work.
4. Plan out class names and class design of each step in the image analysis process.
5. Implement methods of classes.
6. Add user interface for user/database management.

User interface:

- Specify current user for all activities
- View single image
- Add image to sample set
- Order or name images
- "View Results" button/toolbar
- View and navigate all images owned by the current user
- Upload/Delete images
- User add feature for Admin

7. Add the database.
  - Works with Java
  - Can include image files
8. Implement methods to calculate multiple attributes, also known as segment measurements. That is, add a method to automatically process and store segment attributes for mass uploads of images.
  - Each attribute will have an ID number associated to it for easy calls to transfer to the database.
9. Add attributes to the database.
10. Consider how to change image analysis processes before running the process on a large data set. For example, consider other algorithms for Thresholding and Image Segmentation phases.
  - New aspects of processes would preferably be automated. For example, implementing a thresholding algorithm that automatically chooses a threshold.
  - Changes will be determined after attribute methods are determined and working.
11. Run the whole process on a large data set so that attributes are loaded to the database.
  - Determine where to get samples
  - Create samples with red paint and white paper?
  - Determine standards/assumptions about sample images.

12. Ready for Machine Learning.