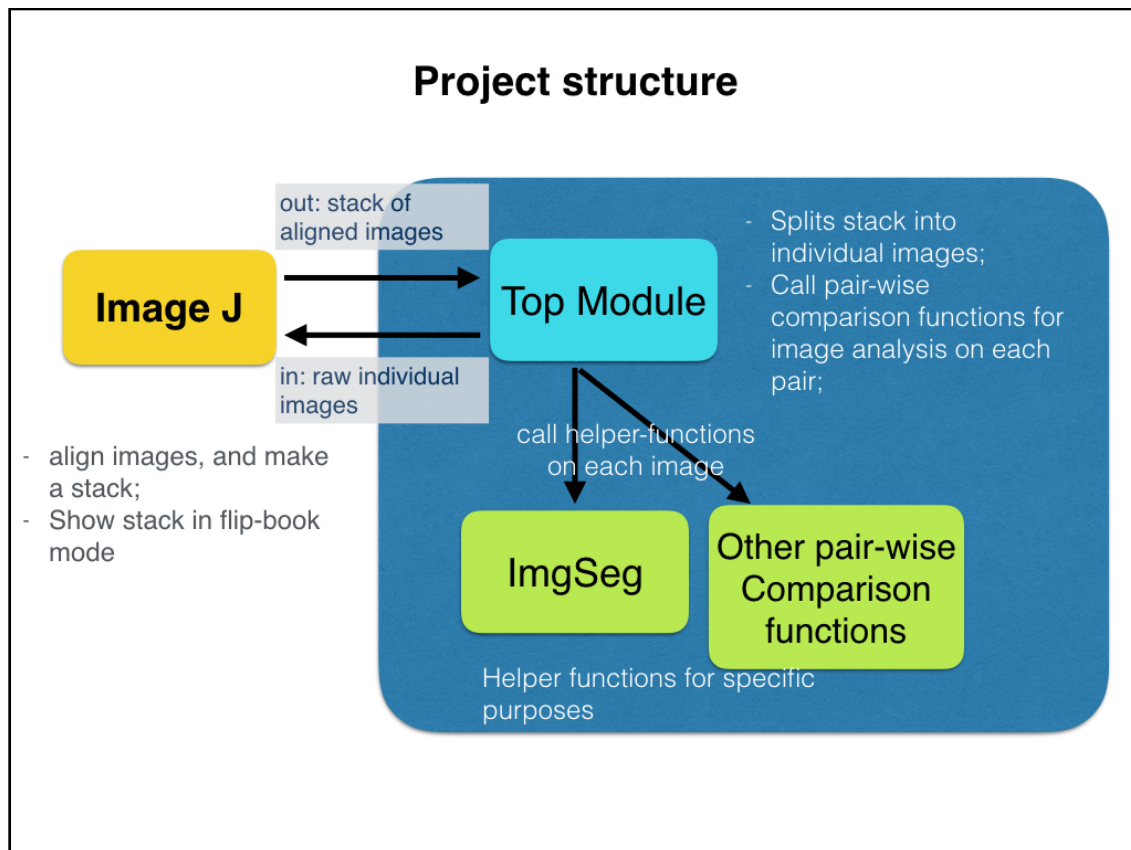## Progress Report 2
Feb. 6, 2017

Goal:

- **New project structure**; more modular (diagram below)
    - Top module: reads in a larger data set; and call helper function for image manipulation on each pair / individual images;
    - Helper functions pair-wise comparison functions
        - image segmentation on each image;
        - pair-wise comparison to refine segmentation results;

- **Version Control:** Set up a Git Repository for Version Control and easier take-over or code sharing;
    - Could easy go back to earlier versions of code;

- **Image alignment** using ImageJ;
- **Image Segmention:**
    - Refine result: reduce noises by comparing adjacent frames,
    - Perhaps track key features between frames;

Project structure

out: stack of aligned images

Image J

in: raw individual images

- align images, and make a stack;
- Show stack in flip-book mode

Top Module

- Splits stack into individual images;
- Call pair-wise comparison functions for image analysis on each pair;

call helper-functions on each image

ImgSeg

Other pair-wise Comparison functions

Helper functions for specific purposes

Trials and Thoughts:

1. For align slices in stack:

1) ImageJ: When choosing bounding rectangles, should first go to the center image, and set the bounding rectangle there;
2) Attempts: Draw bounding rectangle at different location of the frame;
   Conclusion: Setting bounding rectangle to the bottom edge of image works better, compared to setting it to any features; drastically improved compared to setting the box at top
3) Still slightly shaky after aligning;