(some of this might repeat in the pilot folder/some of the dependencies might be messed up but this is what everything does)

**getting mp4s**

* download from youtube (links in\_Movies\_Exp\_Plan excel sheet)
* final cut pro (editing for length & cropping) -> export as mov
* Convert mov -> mp4 in handbrake

**/Movie/Movie\_Stim/feature\_detector\_test.m**

* Extract frames from mp4s & saves as png
* Get face position in each frame using computer vision toolbox Cascade Object Detector
  + box\_pos = [top left x, top left y, width, height]
  + No face detected, box\_pos = NaNs
* Save as (PersonName).mat

**/Movie/Movie\_Analysis/face\_box\_adjustment.m**

* loads in matrices with box pos from(PersonName).mat
* id frames with small face box sizes size or NaN and make pos = nearby box positions
* change size for all boxes to the mean size for video
* visualize where the box is on the face to check
  + coords need to be multiplied by 1.5 to make them compatible to the monitor (which is where the ET coordinates are going to come from)
  + The image is also sized up here to simulate the monitor
* Save as (PersonName)\_adj.mat

**/Movie/Movie\_Analysis/EyeMovement\_Processing.m**

* ascii ET data --> list of fixations with x, y, duration, start, end time
* save as Movie\_Fixes.mat

**/Movie/Movie\_Analysis/Fixation\_Processing.m**

* loads in Movie\_Fixes.mat & (VideoName).mat
* for each fix, for each frame: is it on the face or not? is it up or lower?
  + upper = top 65% of box
  + lower = bottom 35%
* average all frames during fix to get percent time that fix was on the face
* weight to get where they were looking for entire movie, based on length of each fix
* save as: MovieFixes\_ROI\_Tab.mat