Information for opening GUI:

1. in terminal type: *python particle_label_gui_v9.py*
2. A window showing files on your computer should pop up.
3. Within the file window navigate to the subfolders of the **"particle_recognition"** folder, each subfolder should contain a folder called **"adjustedPNG2"**
4. Click **"adjustedPNG2"** , you should see a list one png files, click open button in bottom right corner.
5. The first image to label should now be displayed

NOTE: GUI will always start with first image in a file. If images have already been labeled but GUI is opened on the same file a second time the labels will be overwritten! Once you open a file to label make sure to finish all images before quitting GUI.

Information for labeling images:

● Atomic columns must be resolved to either label particle "yes" or "no"
● If atomic columns are not resolved particle must be labeled "null"
● Particles containing stacking fault should be labeled "yes"
● Particles with atomic columns resolved but no stacking fault should be labeled "no"
● Circle should be centered on particle and as tight fitting as possible without cutting out any part of the particle

Key codes for running GUI:

● *"SHIFT + CLICK"* = select particle
● *"ARROW KEYS"* = move circle to center circle on particle
● *"e"* = enlarge size of circle
● *"d"* = decrease size of circle
● *"y"* = label particle YES
● *"n"* = label particle NO
● *"o"* = label particle NULL
● *"ENTER"* = save labels for this image and load next image, once all files have been labeled hitting enter will quit GUI
● "q" = quit GUI