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

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”
- If you believe there is a stacking fault right by the edge it should be labeled “surfaceSF”
- Particles with an edge dislocation should be labeled “edgeDislcn”
- Circle should be centered on particle and as tight fitting as possible without cutting out any part of the particle
- If the particle seem square or smooshed or bizarre in anyway mark the image “weird”

Key codes for running GUI:

- *“SHIFT + CLICK”* = select particle
- *“ARROW KEYS”* = move circle to center circle on particle
- *“e”* = enlarge size of circle
- “SHIFT + UP ARROW” = super enlarge size of circle
- *“d”* = decrease size of circle
- “SHIFT + DOWN ARROW” = super decrease size of circle
- *“y”* = label particle YES
- *“n”* = label particle NO
- *“o”* = label particle NULL
- “c” = label particle STACKING FAULT ON EDGE
- “f” = label particle EDGE DISLOCATION
- “w” = label entire image as WEIRD
- “] “ = skip to next image without saving
- “ [“ = go back an image
- *“ENTER”* = save labels for this image and load next image, once all files have been labeled hitting enter will quit GUI
- “q” = quit GUI

NOTE: Unlike earlier versions of the GUI version 10 will not overwrite previous labels unless they are deleted and then never put back in before saving.