1. **Installation**
   1. Python components
      1. Anaconda 2.7
      2. OpenCV 3
      3. WX
   2. Go to <https://github.com/laughalot42/PySolo>
2. **On start**, a file selection dialog window will open so you can select a saved configuration.
   1. If you don't have one you want to start with, you can cancel the dialog and a generic configuration will be created, but not saved.
3. **Setting up the** Configuration
   1. The program will open on the main **configuration** page.
   2. There are **tabs on the left side** that allow you to switch to monitor pages.
   3. **Load a configuration** at any time by typing in the name and pressing enter, or using the browse button.
   4. **Save Configuration** - saves the configuration and all monitor settings to a file.
   5. **Add Monitor** - adds another monitor to the configuration (max. of 9 monitors allowed).
      1. The new monitor will be a copy of the last monitor in the list.
   6. **troubleshooting:**
      1. If scrollbars disappear from configuration page, go to any monitor page, then return to the configuration page.
   7. **Start Acquisition** - uses current configuration to collect data.
      1. If files with the output names already exist, you will be asked for a new prefix.
         1. The **name of the monitor** that you are choosing a prefix for is on the label at the top of the save file dialog window.
         2. You cannot overwrite a file. If you want to reuse the name, delete the old file.
      2. **The output** is a collection of files with the names shown in "Output Prefix" on the table, each with 32 ROIs, and numbered consecutively.

e.g. for output prefix "c:\pathname\Monitor1":

"c:\pathname\Monitor11.txt" will contain data for ROIs 1-32,

"c:\pathname\Monitor12.txt" will contain data for ROIs 33-64, etc.

* + 1. There may be long pauses during Acquisition from time to time.
    2. The program doesn't respond during Acquisition. It's best to just leave it alone until it's done.
  1. **Stop Acquisition** - not functioning. Code for the button is in the program, but right now it sends the program to never-never-land.
  2. **View Monitors**  - returns to monitor panels after acquisition.
  3. **DAMFileScan 110X** - runs the DAM FileScan program in a separate window.
  4. I was unable to add a button to start **SCAMP** since I don't have MATLAB at home. Code for the button is in the cfgPanel.py file, and is commented out.

1. Click on a monitor tab on the left side to open a **monitor configuration page**
   1. Two types of **sources** are available.
      1. To change the source, click on a field or button and supply the appropriate information.
      2. The real-time camera option has been commented out because there is no end of video that would cause Acquisition to stop.
   2. A different **mask file** may be loaded by supplying the appropriate information
   3. The **output folder** is the folder where the acquired data will be saved.
   4. **Time Settings** refer to the date and time that the camera started recording.
   5. **Tracking parameters** - I've only maintained code for distance tracking, and all monitors in the configuration will be tracked.
      1. A panel of controls for tracking is in the maskPanel.py code and commented out if someone wants to add them back in.
   6. **Mask Generator**
      1. The diagram shows what each of the terms means.
      2. Clicking on the video image will change the "Top Left" settings to the coordinates of the pixel that was clicked. These numbers are based on the full sized image, not the image shown on the screen.
      3. After entering the mask's values, click the generate mask button to show the mask on the video.
      4. To save the mask use the save mask button.
   7. Changing the **frame size** and **preview fps** only affects the image on the screen. All tracking is done using the full size image.
   8. The **ROI line thickness** changes the thickness of the lines displayed on the video but has no effect on data acquisition.
      1. If your ROIs seem to have missing parts, increasing the line thickness will probably resolve that.
   9. **Save Configuration** button saves all monitor configurations to a file.
   10. **Delete Monitor** - removes the monitor from the configuration.