

68636 Screenshot Summary

- 68636_screenshot_2.1.2_2.3.1.mp4
 - 2.1.2 (Typing **conda activate isonet_env** in the terminal) **0:02 – 0:09**
 - 2.2.1 (A subfolder named **tomo_folder** is being created) **0:22 – 0:27**
 - 2.2.1 (Moving all tomogram files to tomo_folder) **0:33 – 0:49**
 - 2.2.2 (Writing code to generate star file) **1:28 – 1:57**
 - 2.3.1 (Open **tomograms.star** file) **2:06 – 2:11**
 - 2.3.1 (Highlighting **_rlnDefocus** column) **2:15 – 2:17**
 - 2.3.1 Entering defocus values in the column) **2:26 – 2:50**
 - 2.3.1 Saving the edited star file and exiting out) **3:09 – 3:12**
- 68636_screenshot_2.4.1.mp4
 - 2.4.1 (Executing the deconvolution command) **0:02 – 2:52**
- 68636_screenshot_2.4.2.mp4
 - 2.4.2 (Codes used to activate EMAN2 GUI) **0:02 – 0:14**
- 68636_screenshot_2.5.1_2.6.1.mp4
 - 2.5.1 (GUI navigation to **Tomography > Raw Data > Import Tomograms** . Also shows tomograms being imported in the terminal) **0:03 – 0:34**
 - 2.6.1 (Selecting **Segmentation > Preprocess tomograms**) **0:49 – 0:55**
 - 2.6.2 (Show settings applied and launch preprocessing step) **1:08 – 1:19**
- 68636_screenshot_2.6.3_2.6.4.mp4
 - 2.6.3 (Showing the auto-generated **info** directory) **0:02 – 0:07**
 - 2.6.4 (Adding angpix information to the files) **0:07 – 0:32**
- 68636_screenshot_2.7.1_2.8.1.mp4
 - 2.7.1 (Showing the terminal as I execute the command to get to the tomograms) **0:02 – 0:10**
 - 2.7.2 (Launching the CNN GUI with the label parameter) **0:15 – 0:33**
 - 2.8.1 (Showing the four-window layout with my cursor hovering over the parameters panel, Positive panel, Negative panel, and Particles panel) **0:39 – 0:50**
- 68636_screenshot_2.9.1_2.10.2.mp4
 - 2.9.1 (Showing the **New** option selected and the showing the learning rate and box size settings) **0:02 – 0:10**
 - 2.10.1 (Representative tomogram being opened from the **FileName** column) **0:10 – 0:16**
 - 2.10.2 (Z-axis is being scrolled through from the N# slider) **0:16 – 0:26**
- 68636_screenshot_2.11.1_2.11.3.mp4
 - 2.11.1 Switching to **Good References** panel and selecting positive references from tomogram) **0:02 – 0:22**
 - 2.11.2 (Images of selected reference appear in the **Positive** window) **0:02 – 0:22**
 - 2.11.3 (Showing a reference being removed) **0:22 – 0:25**
- 68636_screenshot_2.12.1_2.12.3.mp4
 - 2.12.1 (Switching to Bad References panel) **0:02 – 0:05**
 - 2.12.2 Selecting bad references) **0:05 – 0:17**

- 2.12.3 (Bad references appearing in the **Negative** window) **0:05 – 0:17**
- 68636_screenshot_2.13.1.mp4
 - 2.13.1 (Shows the **Niter** setting being changed and the **Train** button being clicked) **0:03 – 0:09**
 - 2.13.1 (Shows the final output from the training being written into the terminal) **0:18 – 0:20**
- 68636_screenshot_2.14.1_2.14.2.mp4
 - 2.14.1 (Selecting **Apply**) **0:04 – 0:06**
 - 2.14.2 (Hovering cursor over selected particles in the tomogram and then hovering cursor over Particles window) **0:19 – 0:35**
- 68636_screenshot_2.15.1.mp4
 - 2.15.1 (Selecting more good references and clicking **Save**) **0:03 – 0:23**
- 68636_screenshot_2.15.2_2.15.3.mp4
 - 2.15.2 (Showing **Apply All** being selected) **0:02 – 0:04**
 - 2.15.3 (Showing overlayed particles on one tomogram) **0:11 – 0:15**
 - 2.15.3 (Showing overlayed particles on one tomogram) **0:22 – 0:27**
 - 2.15.3 (Showing overlayed particles on one tomogram) **0:32 – 0:36**
- 68636_screenshot_2.16.1_2.17.2.mp4
 - 2.16.1 (e2projectmanager.py command is being input and the EMAN2 GUI is being opened) **0:02 – 0:08**
 - 2.16.2 (Arrow at **Subtomogram Average** is being clicked and **Manual Boxing** is being selected) **0:08 – 0:11**
 - 2.17.1 (Tomogram name entered and program launched) **0:11 – 0:16**
 - 2.17.2 Window opens up and the coordinates are saved) **0:16 – 0:40**
- 68636_screenshot_2.17.3.mp4
 - 2.17.3 (Showing the info and neuralnet files being backed up) **0:02 – 0:30**
- 68636_screenshot_2.18.1.mp4
 - 2.18.1 Showing the second CNN GUI being opened up and the box size set to 14) **0:02 – 0:28**
- 68636_screenshot_3.1.1.mp4
 - 3.1.1 (Downloading scripts from GitHub) **0:02 – 0:05**
- 68636_screenshot_3.1.2_3.2.3.mp4
 - 3.1.2 (The CNN_Particle_Cleaning.ipynb notebook is being opened and the required modules are being loaded) **0:02 – 0:08**
 - 3.2.1 (Coordinate file is being loaded in) **0:08 – 0:13**
 - 3.2.2 (Open3D library is being used to view the file as 3D point clouds) **0:13 – 0:21**
 - 3.2.3 (Applying code to remove outlier and save curated particle file) **0:21 – 0:36**
- 68636_screenshot_3.3.1_3.3.2.mp4
 - 3.3.1 (Showing identified HA points of more than 20 pixel) **0:07 – 0:13**
 - 3.3.2 (Saving the remaining coordinates in a text file) **0:13 – 0:15**
- 68636_screenshot_3.4.1.mp4
 - 2.4.1 (Show running the notebook cell that concatenates particles and writes starfiles) **0:03 – 0:15**
- 68636_screenshot_3.4.2.mp4

- 3.4.2 (Showing terminal executing WarpTools command) **0:02 – 0:12**
- 68636_screenshot_3.5.1_3.5.2.mp4
 - 3.5.1 (Showing terminal running the conversion command) **0:05 – 0:20**
 - 3.5.2 (Showing initial reference generation step) **0:20 – 0:50**
 - 3.5.2 (Showing final initial reference generation step) **0:55 – 1:03**
- 68636_screenshot_3.6.1_3.6.2.mp4
 - 3.6.1 (Terminal shown executing the 3D auto-refinement command) **0:02 – 0:10**
 - 3.6.2 (Updating the settings and re-running the command) **0:20 – 0:36**
- 68636_screenshot_3.7.1.mp4
 - 3.7.2 (Showing 2D classification being executed on the terminal) **0:03 – 0:13**
- 68626_screenshot_3.8.1.mp4
 - 3.8.1 (Showing star file of good class being created) **0:14 – 0:48**
 - 3.8.1 (Showing another star file being created) **0:54 – 1:09**
 - 3.8.1 (Showing final star file being created) **1:32 – 1:44**
- 68626_screenshot_3.8.2.mp4
 - 3.8.2 (Showing the star files being combined into one final file) **0:18 – 0:54**