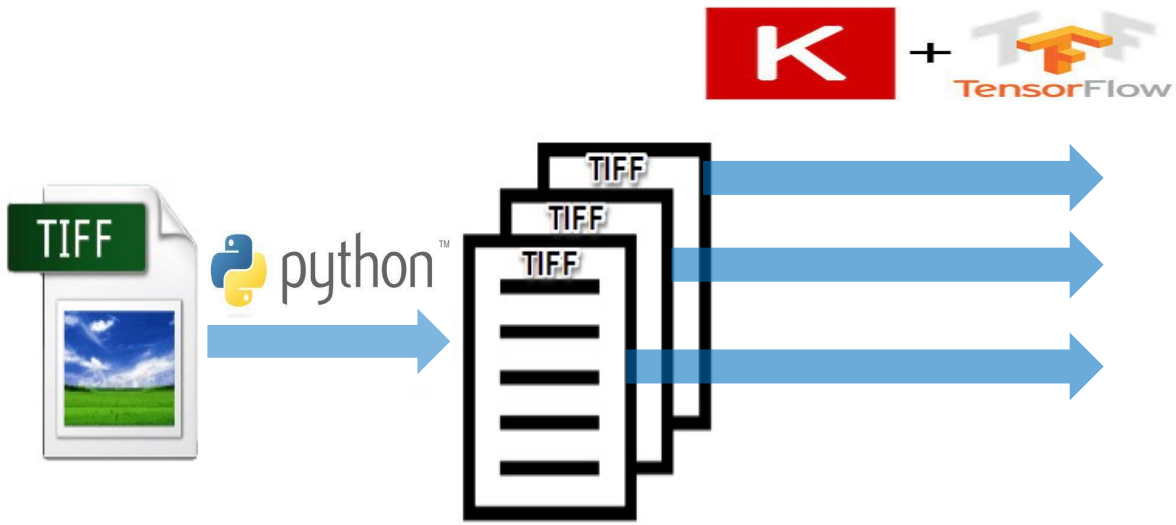
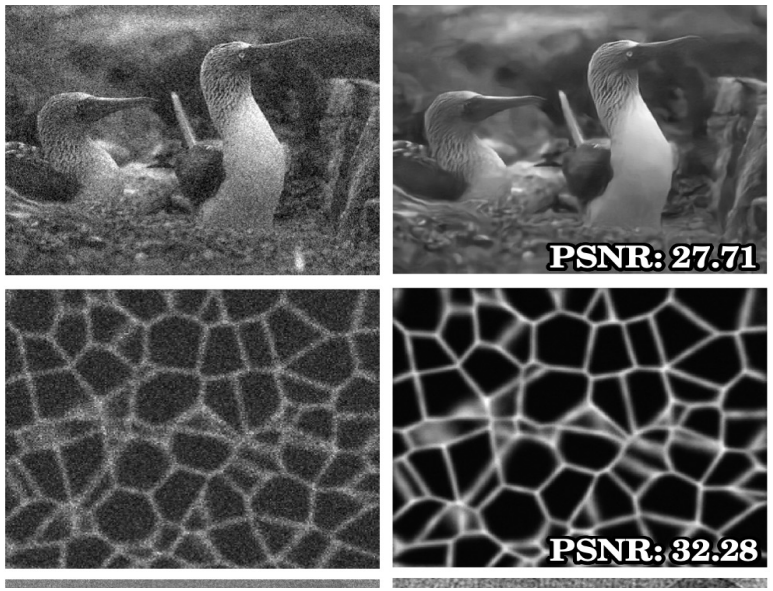
OUR DATA SCIECE APPROACH

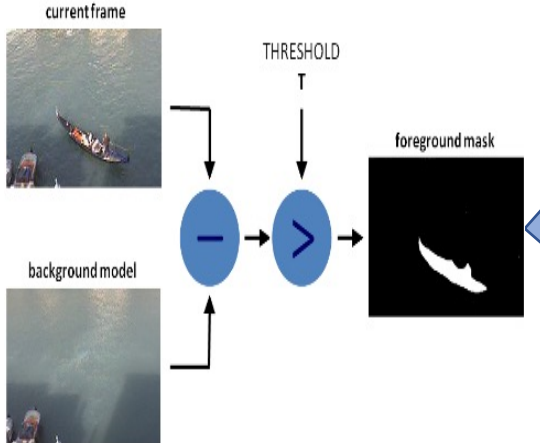


Noise2Void



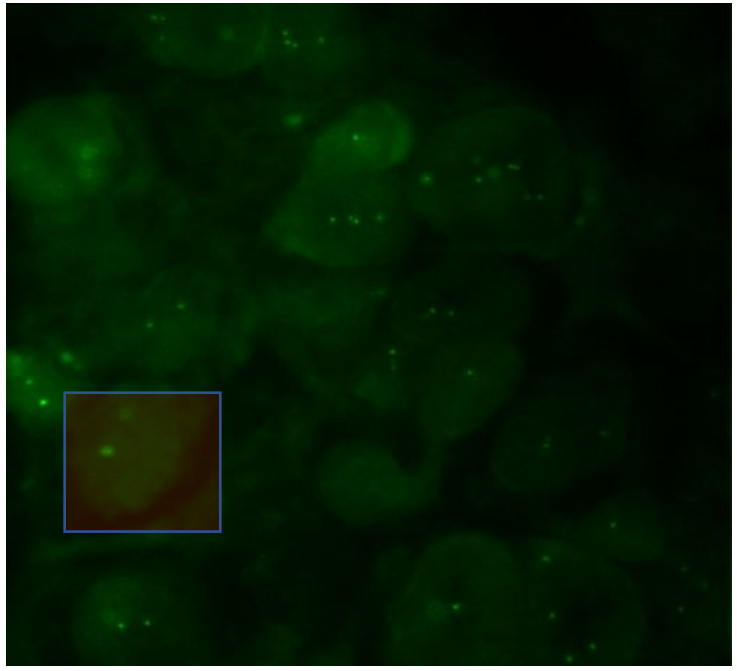
Thunderstorm

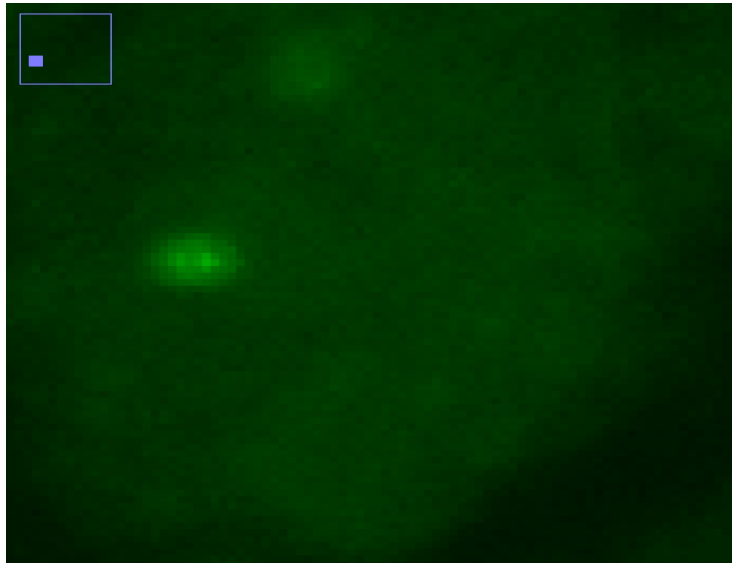
Image Background Subtraction



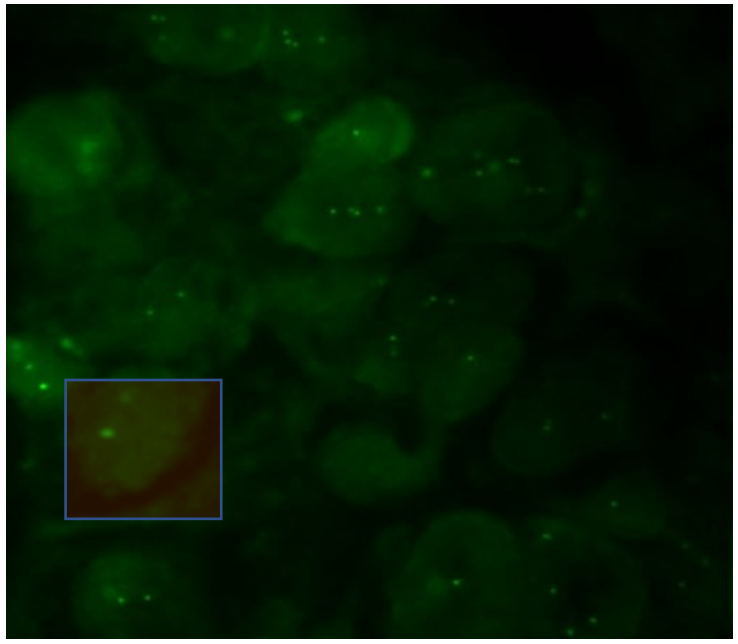
BCN Consultum

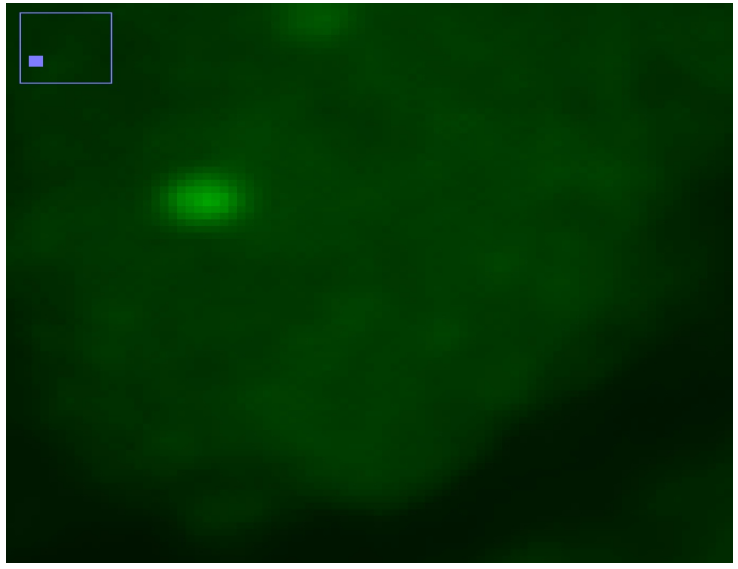
After splitting the 5000-page tiff file, we insert each image into the N2V model we trained before. The N2V model makes predictions and changes the data it detects as noise in the image. This is the most time-consuming part of the process.





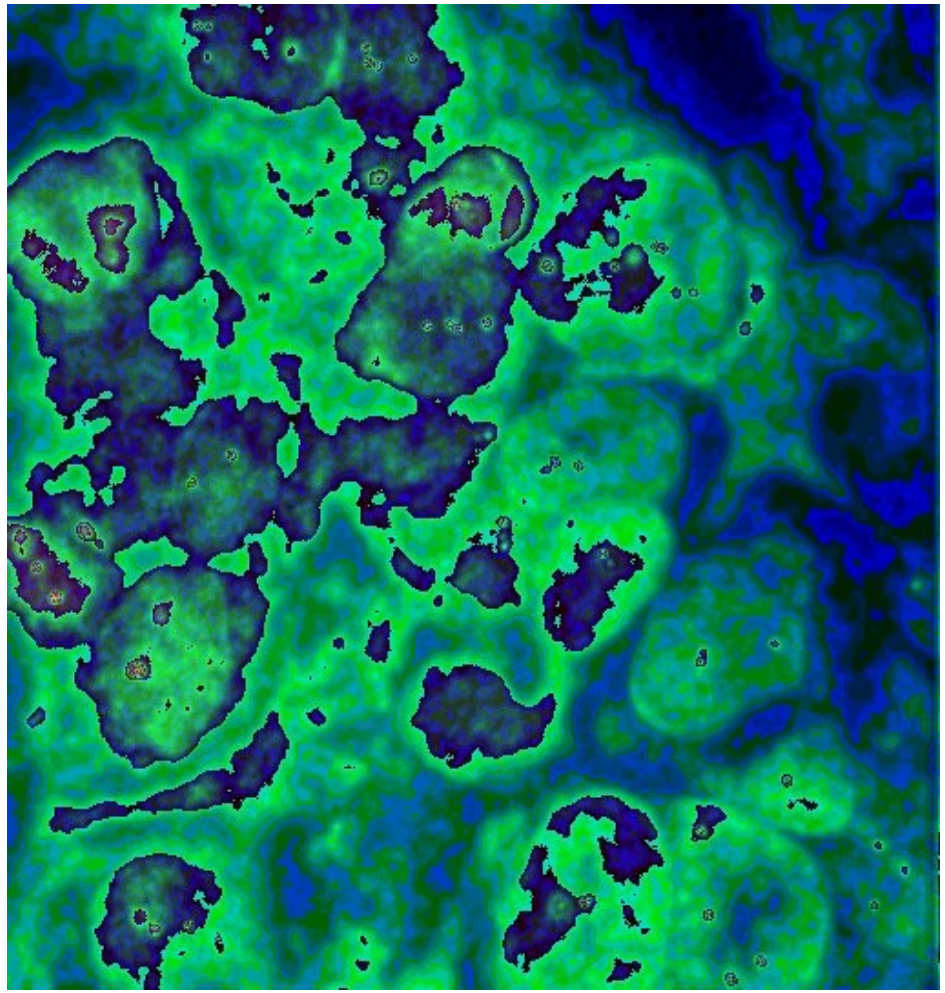
Noise2Void

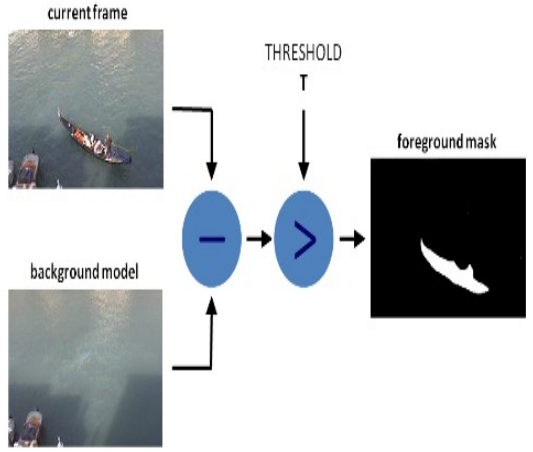


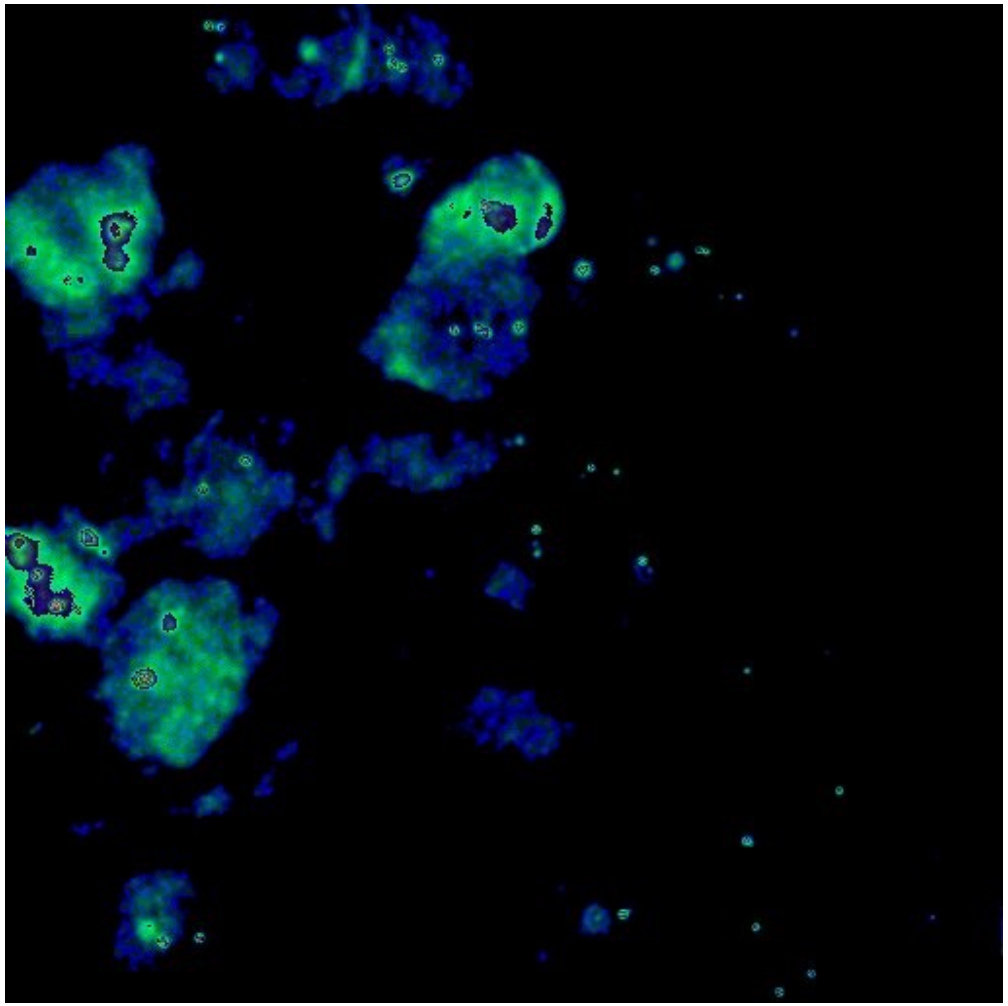


After the images are cleaned using the N2V model, we apply image subtraction. For this we need to set a threshold parameter. Our parameter in this image is 1050. This value can be changed to make the subtraction more or less as desired. After the image subtraction is completed, all images are combined to create a multi tiff file.

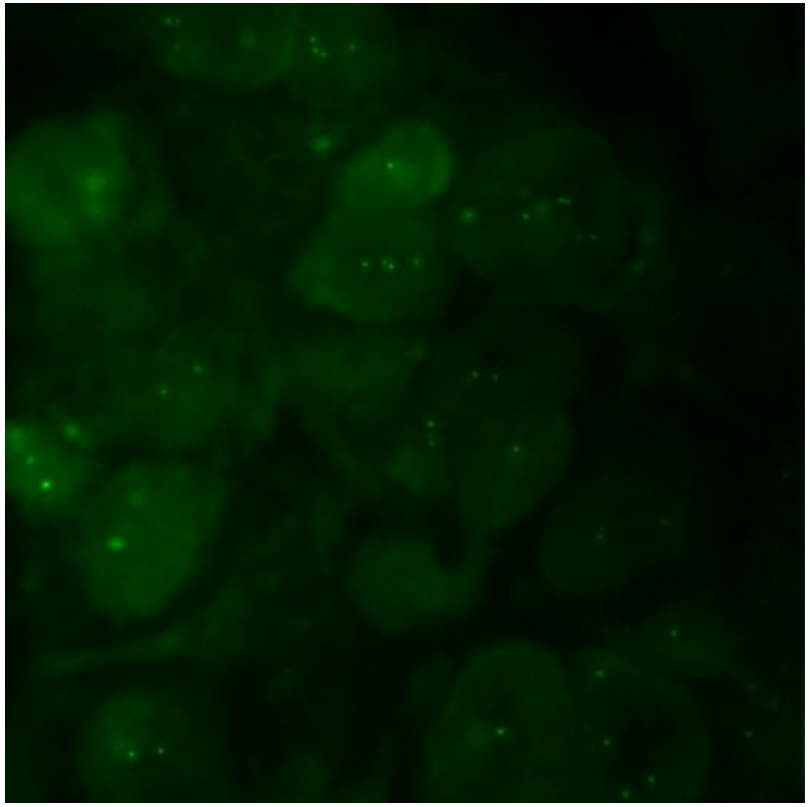
Image Background Subtraction

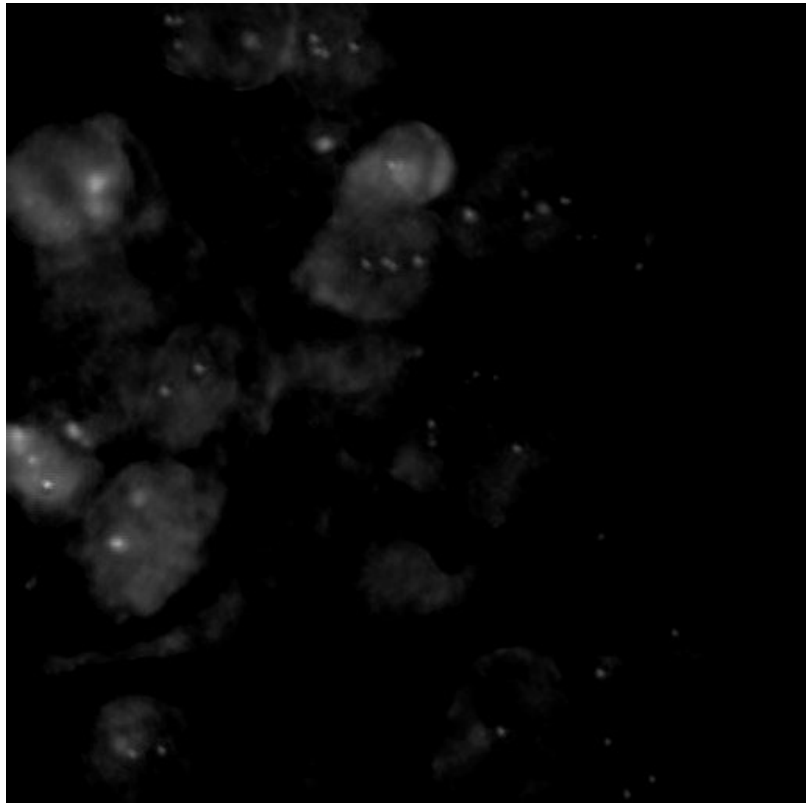


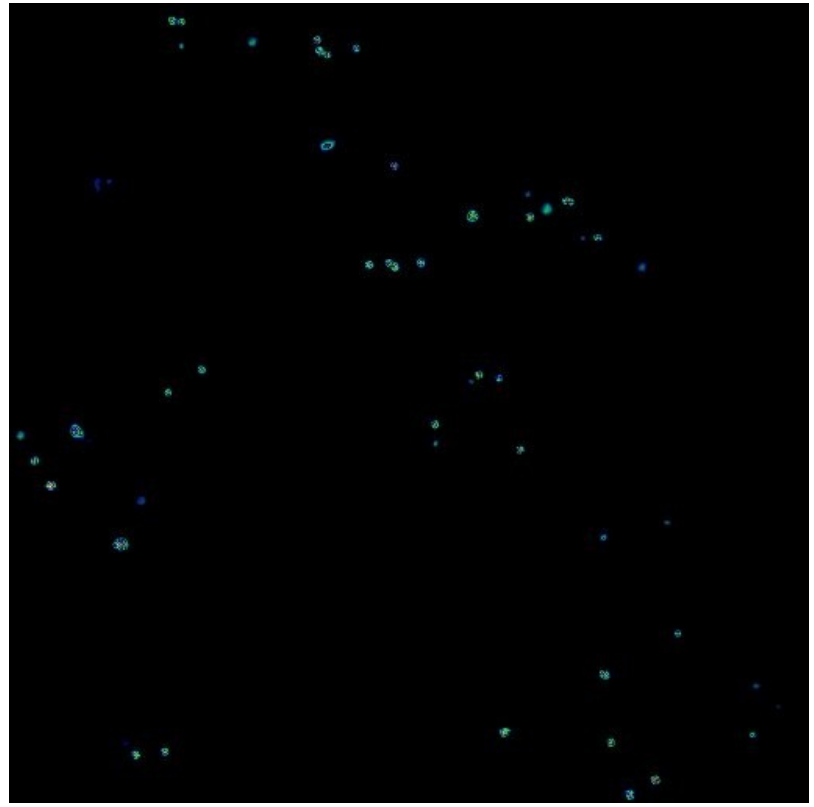




Improvement
Fine Tuning



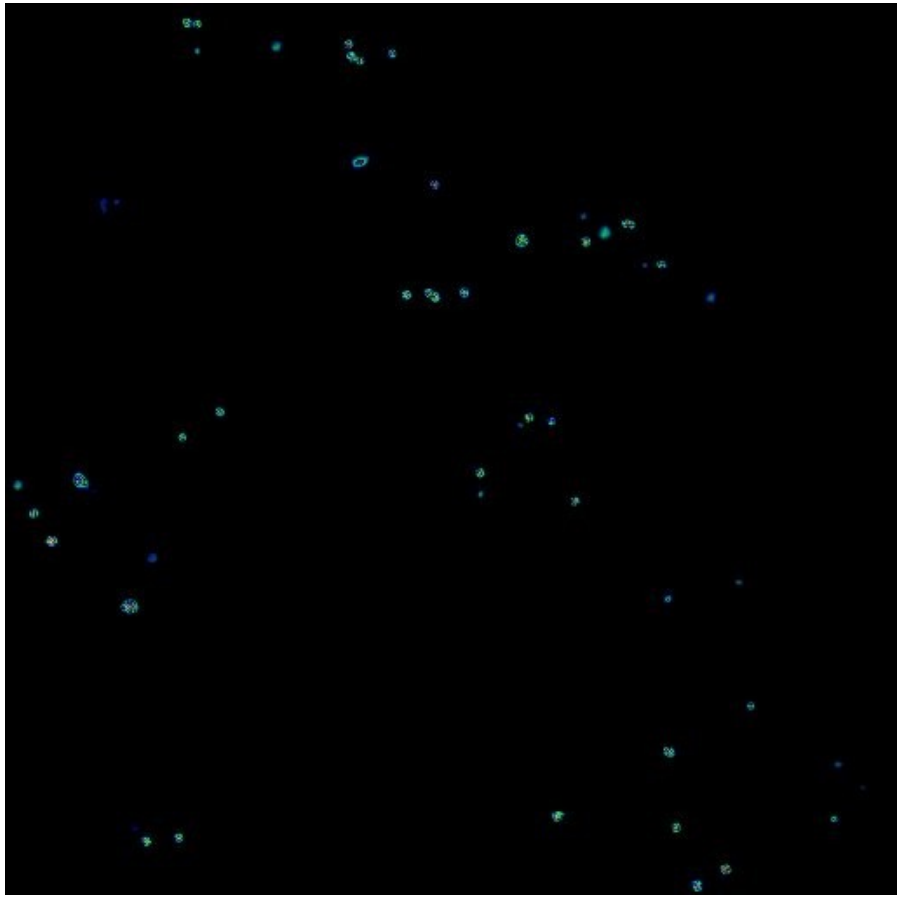




As a final step, a super-resolution image is produced using Fiji's thunderstorm plugin.

It can take a long time to do this and similar transactions manually with Fiji. Most of these processes are applied repeatedly for 5000 images. We can create a service that can generate macros for all these operations . For example, for this process, it is necessary to write about 50000 lines of macros. But if you use generator for all these operations, it will be sufficient to run the macro file.

MULTI TIFF FILE (5000 PAGE)



Thunderstorm

Super-resolution Image

High Definition Image

Super-resolution Image

High Definition Image