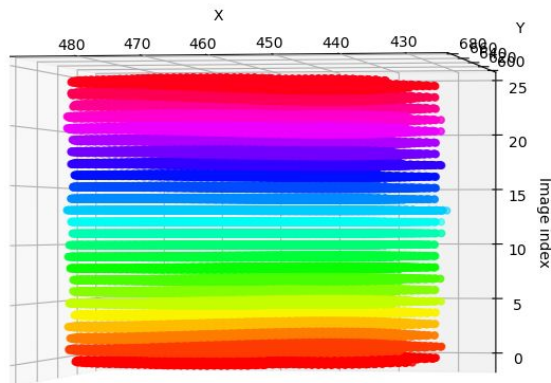
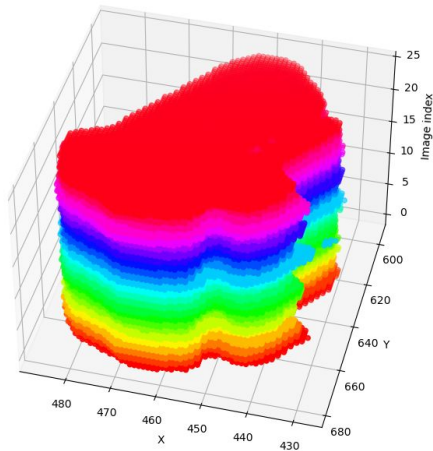
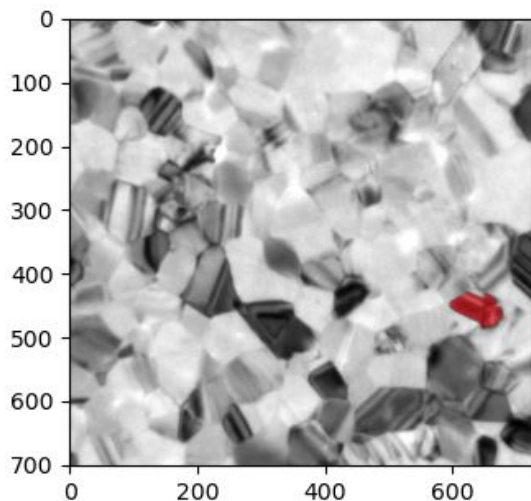


Criterion for Mode filter

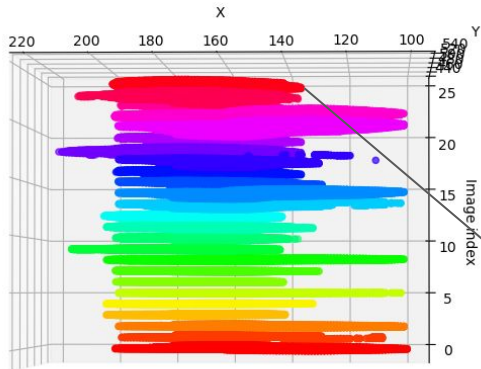
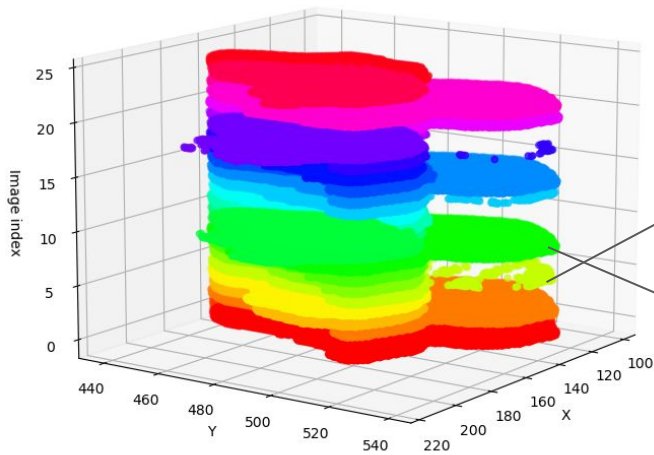
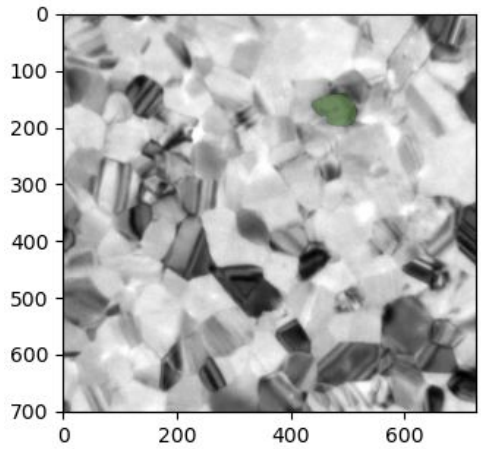
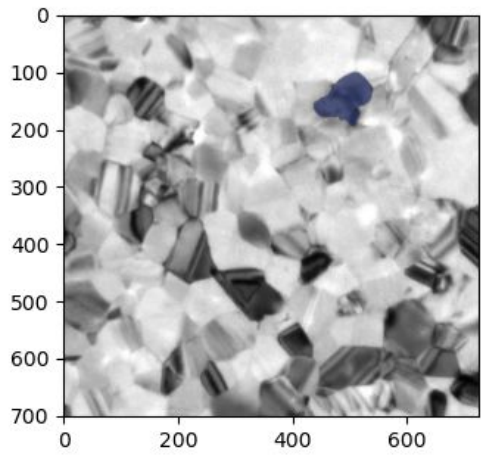
- We have centroid or IOU score
- Hyperparameter, distance between the centroids and distance between the IOU score

Happy case



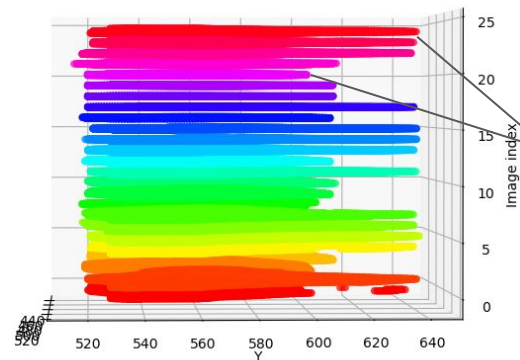
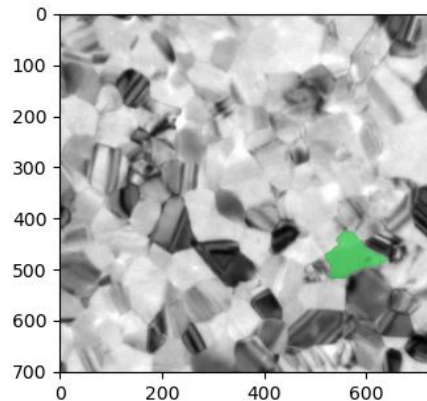
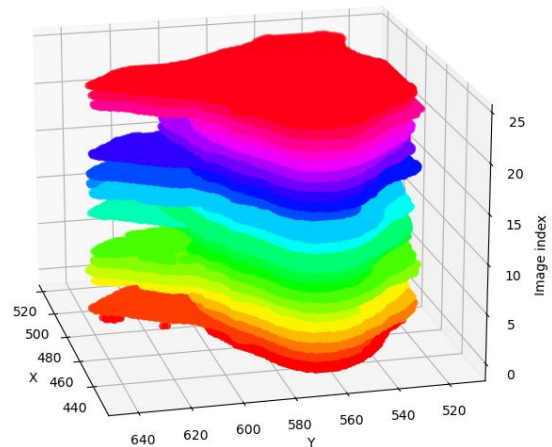
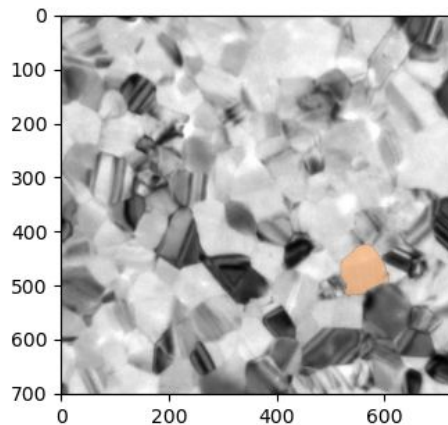
	x_mean	y_mean	IOU threshold
0	456.025570	640.841050	0.733274
1	456.392613	640.965458	0.714144
2	456.658537	641.362021	0.707891
3	456.651689	641.141066	0.756091
4	456.871119	640.679783	0.733346
5	456.799860	640.983526	0.733494
6	456.575475	640.520258	0.730477
7	456.321454	640.858840	0.734778
8	456.592169	641.068261	0.734284
9	456.554213	641.440953	0.806315
10	456.873061	641.139281	0.753251
11	456.697551	640.823571	0.768582
12	456.864874	641.092678	0.727139
13	456.041890	641.302279	0.711336
14	457.630258	641.075646	0.718643
15	456.756246	640.780157	0.730694
16	456.710800	640.706494	0.752557
17	456.278279	641.070090	0.738491
18	456.607595	641.212377	0.744068
19	456.656548	640.819979	0.741218
20	456.512742	641.618077	0.767050
21	456.498306	641.603320	0.749988
22	456.480749	640.913105	0.745597
23	456.860621	640.924135	0.737130
24	456.927362	641.402327	0.726030

Unhappy Cases - variation across vertical x axis



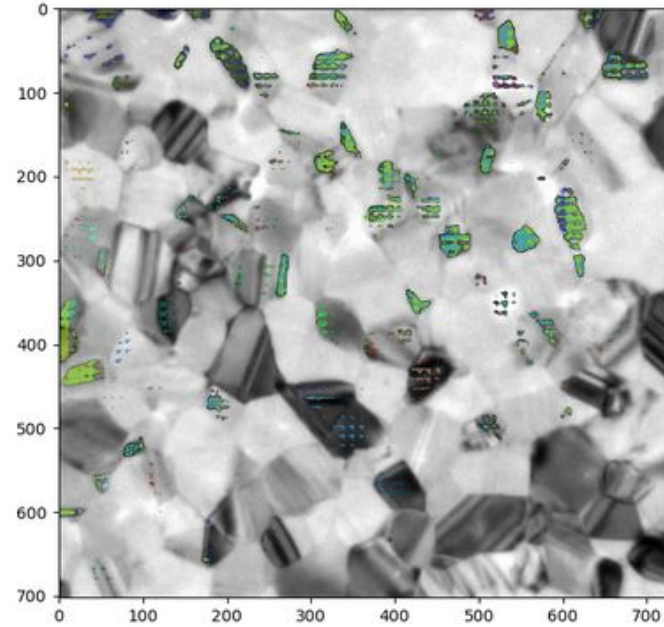
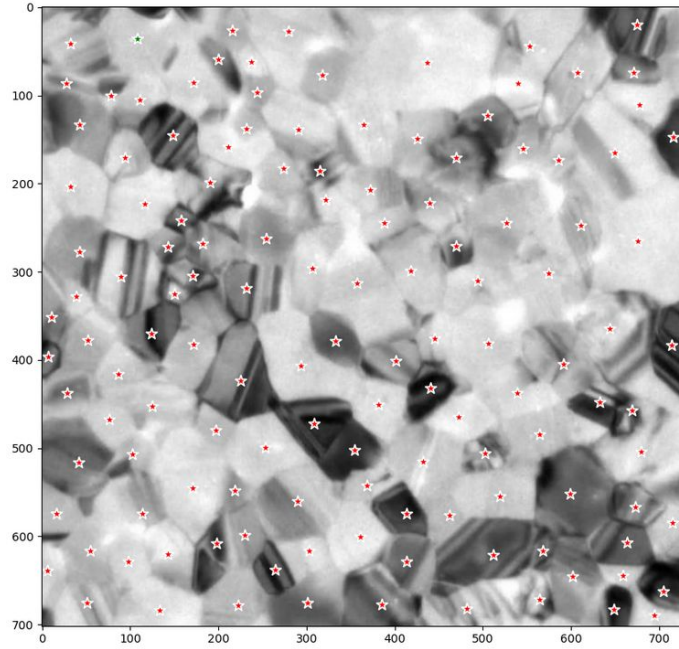
	x_mean	y_mean	IOU threshold
0	147.736585	493.669919	0.698674
1	158.112026	482.284679	0.655867
2	146.973630	493.562745	0.675774
3	168.275064	480.964653	0.709038
4	167.243953	481.023304	0.688618
5	158.140557	485.016376	0.684511
6	165.885652	480.402403	0.706445
7	164.697622	479.744859	0.686976
8	151.691900	492.359119	0.651892
9	173.701072	479.458545	0.693865
10	167.937582	480.394547	0.688499
11	166.387583	480.942559	0.640592
12	169.502359	480.465241	0.723480
13	158.204369	485.636892	0.659757
14	147.602742	493.853118	0.663187
15	161.346878	480.284110	0.678981
16	165.237182	479.726431	0.718495
17	161.000980	480.727451	0.644537
18	173.364757	479.624197	0.680151
19	165.167479	480.070682	0.677642
20	147.346767	493.105141	0.648478
21	150.849939	493.032577	0.677163
22	165.469297	479.020469	0.662933
23	169.211776	481.478730	0.647559
24	166.818182	480.352461	0.650608

Unhappy Cases - variation across horizontal y axis

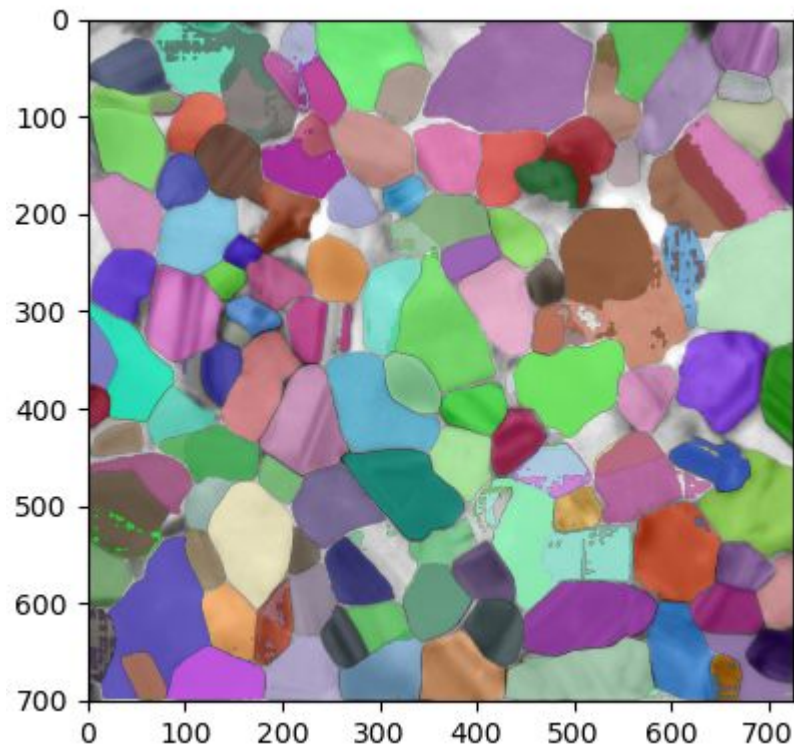
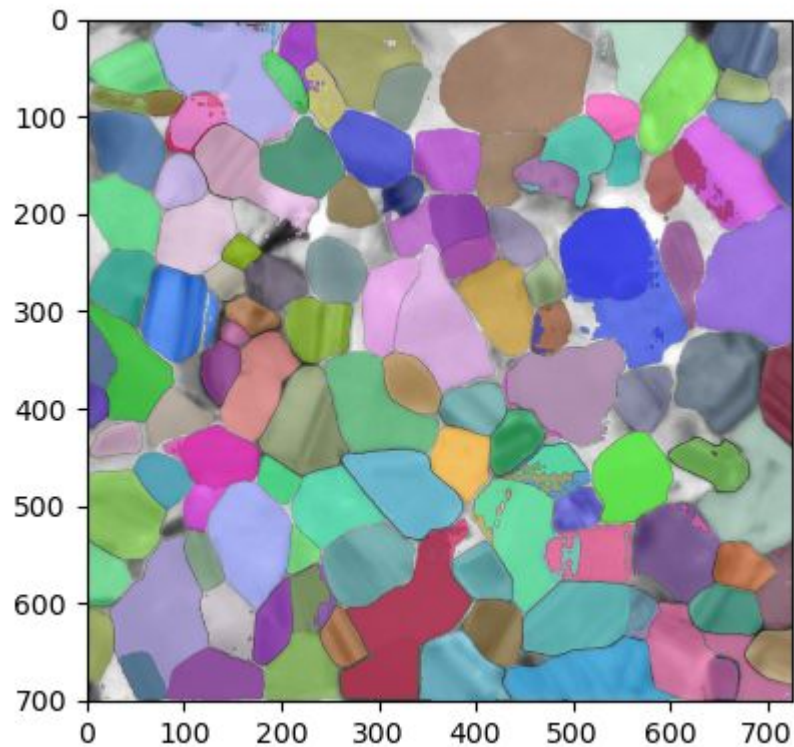


	x_mean	y_mean	IOU threshold
0	147.736585	493.669919	0.698674
1	158.112026	482.284679	0.655867
2	146.973630	493.562745	0.675774
3	168.275064	480.964653	0.709038
4	167.243953	481.023304	0.688618
5	158.140557	485.016376	0.684511
6	165.885652	480.402403	0.706445
7	164.697622	479.744859	0.686976
8	151.691900	492.359119	0.651892
9	173.701072	479.458545	0.693865
10	167.937582	480.394547	0.688499
11	166.387583	480.942559	0.640592
12	169.502359	480.465241	0.723480
13	158.204369	485.636892	0.659757
14	147.602742	493.853118	0.663187
15	161.346878	480.284110	0.678981
16	165.237182	479.726431	0.718495
17	161.000980	480.727451	0.644537
18	173.364757	479.624197	0.680151
19	165.167479	480.070682	0.677642
20	147.346767	493.105141	0.648478
21	150.849939	493.032577	0.677163
22	165.469297	479.020469	0.662933
23	169.211776	481.478730	0.647559
24	166.818182	480.352461	0.650608

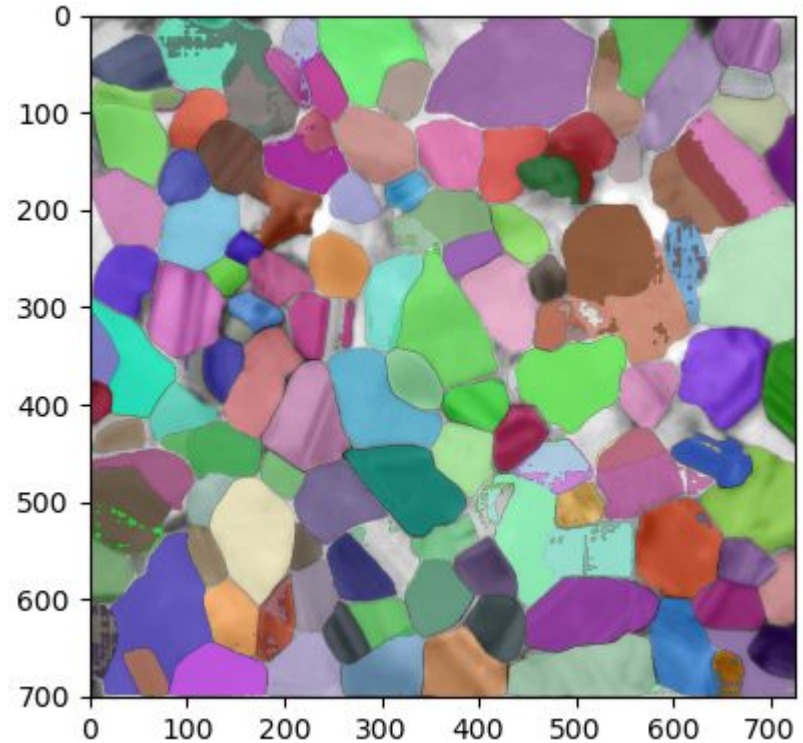
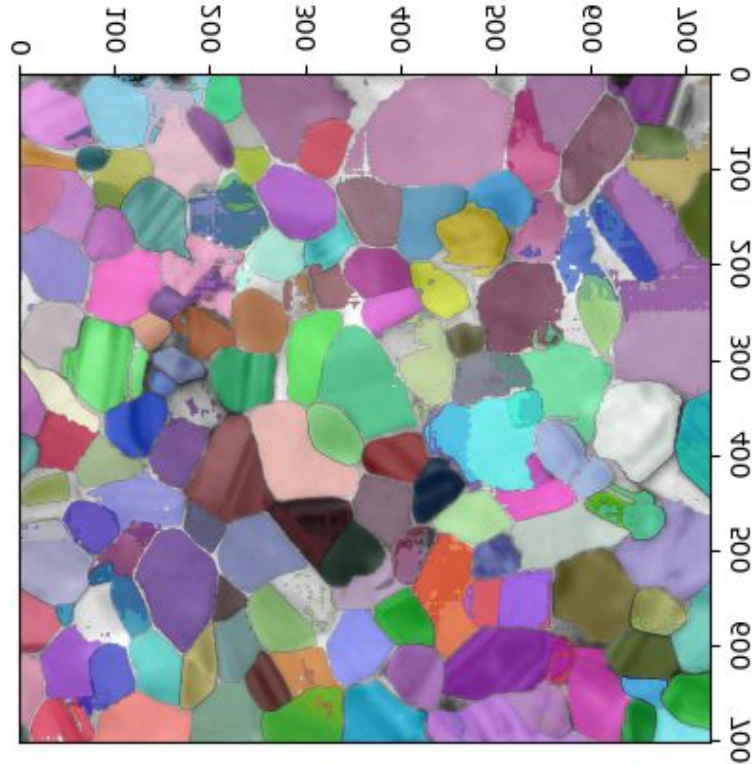
Using Other Centroid as negative prompts .



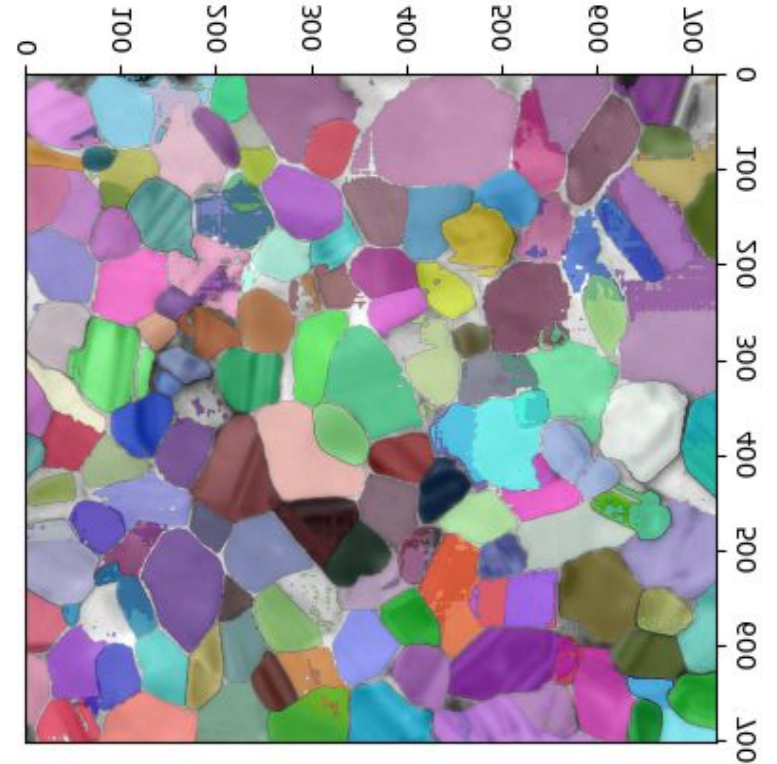
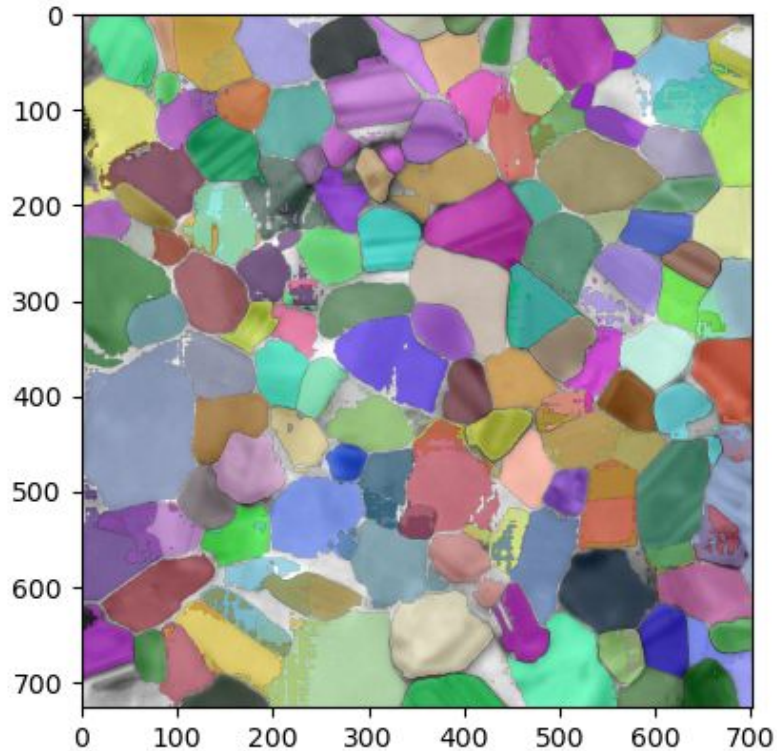
Left without Mode Filter, Right with Mode filter



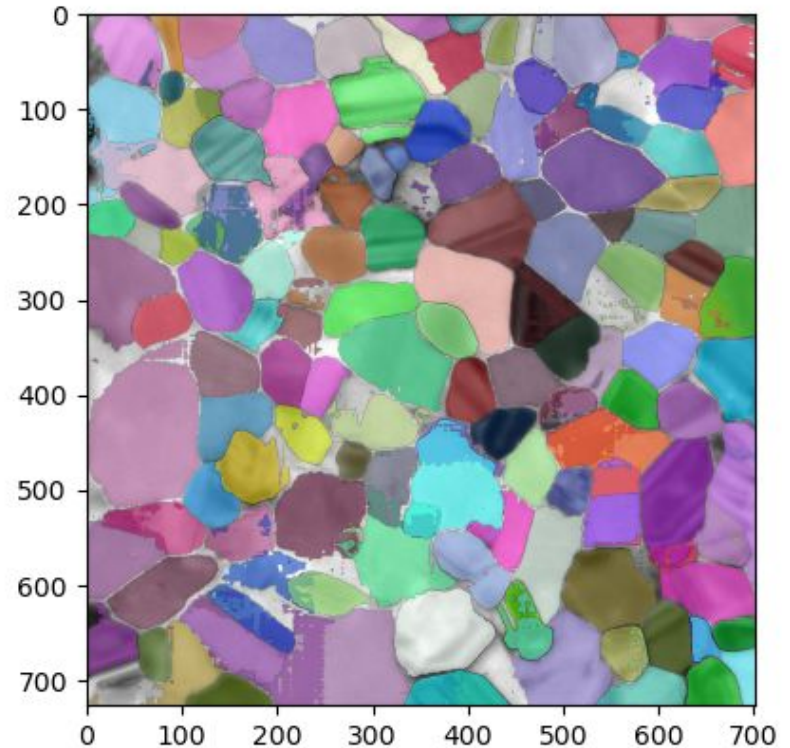
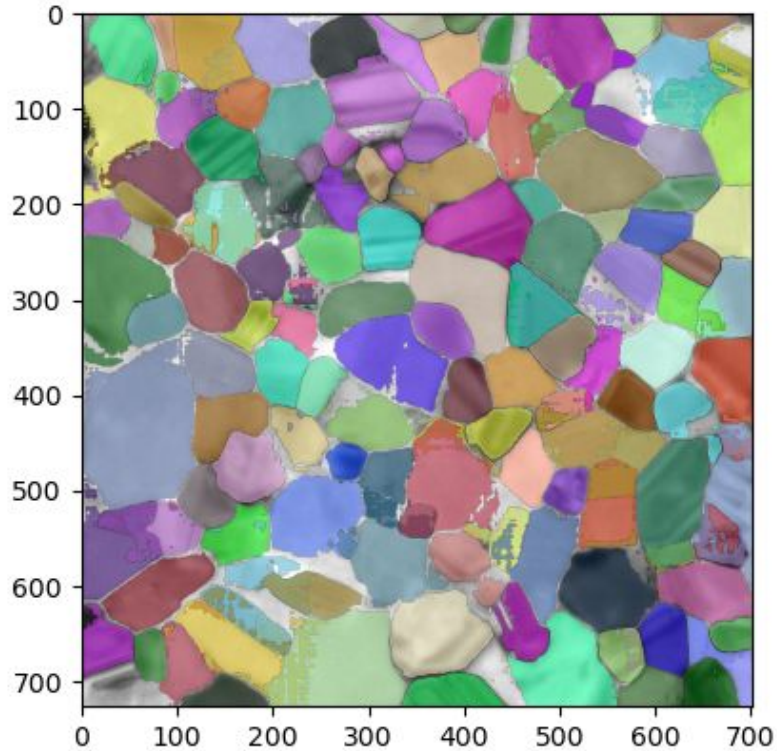
Left with negative labels, right without negative labels. Both mode filter.



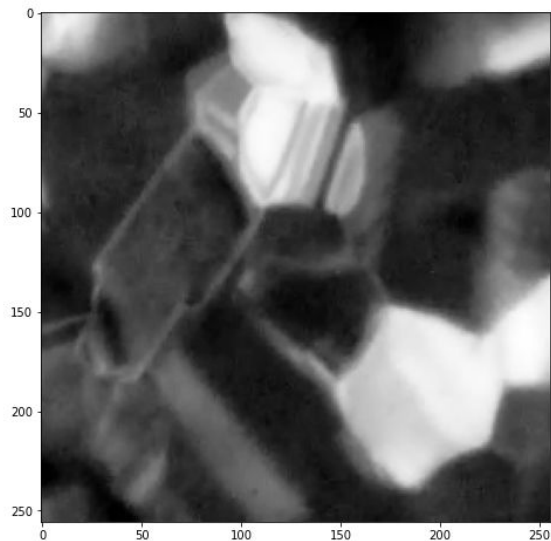
With Negative neighbour labels, left without and right with mode filter



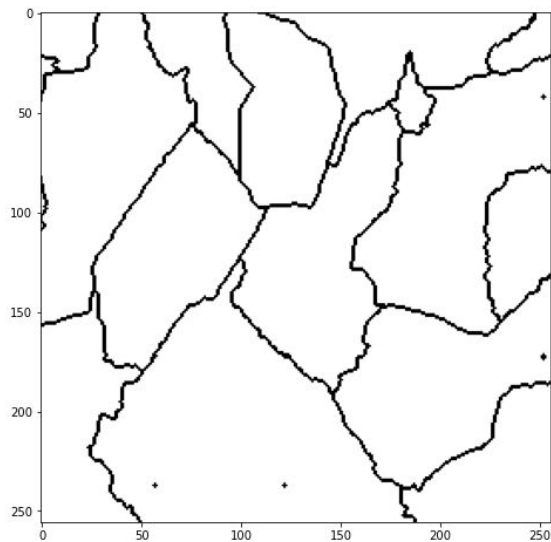
With Negative neighbour labels, left without and right with mode filter



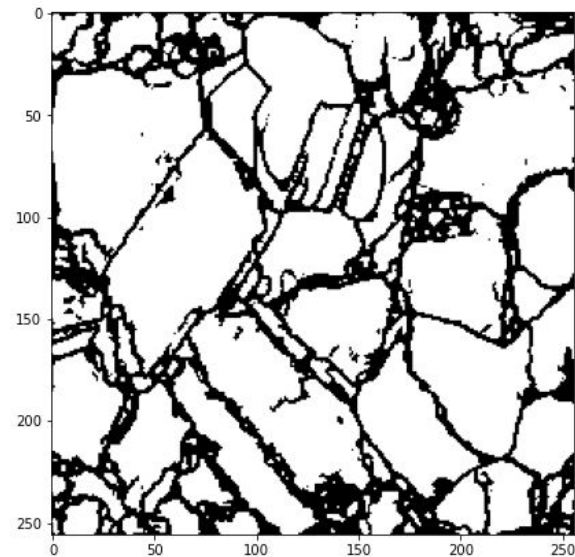
Img i/p



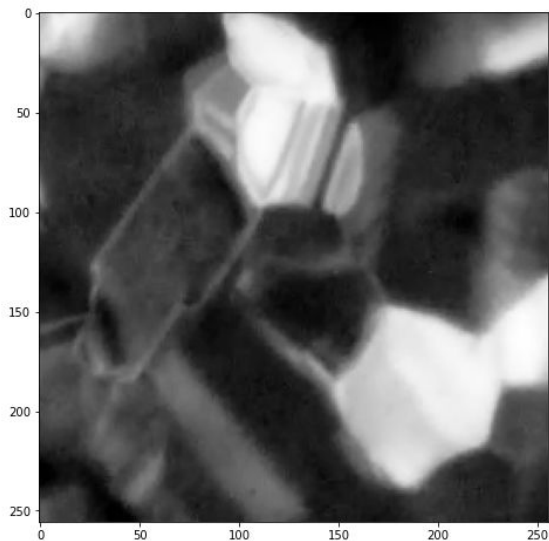
Mask used for training



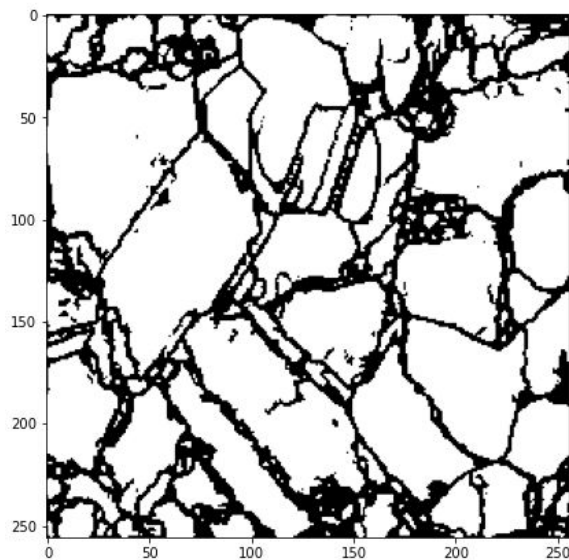
Mask generate by n/w



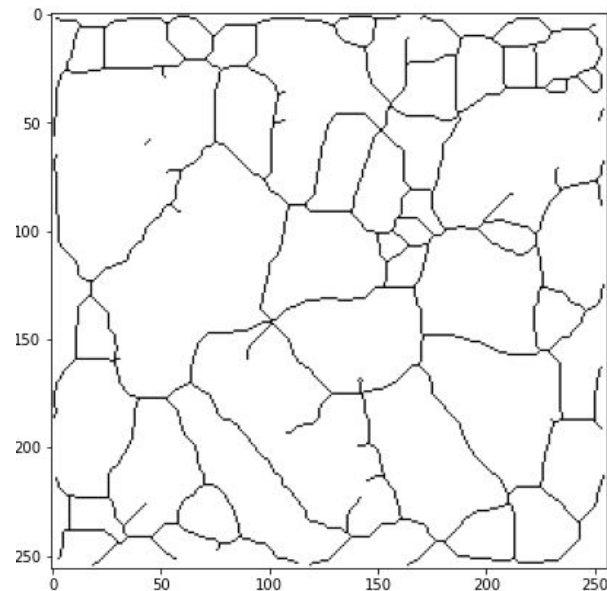
Img i/p



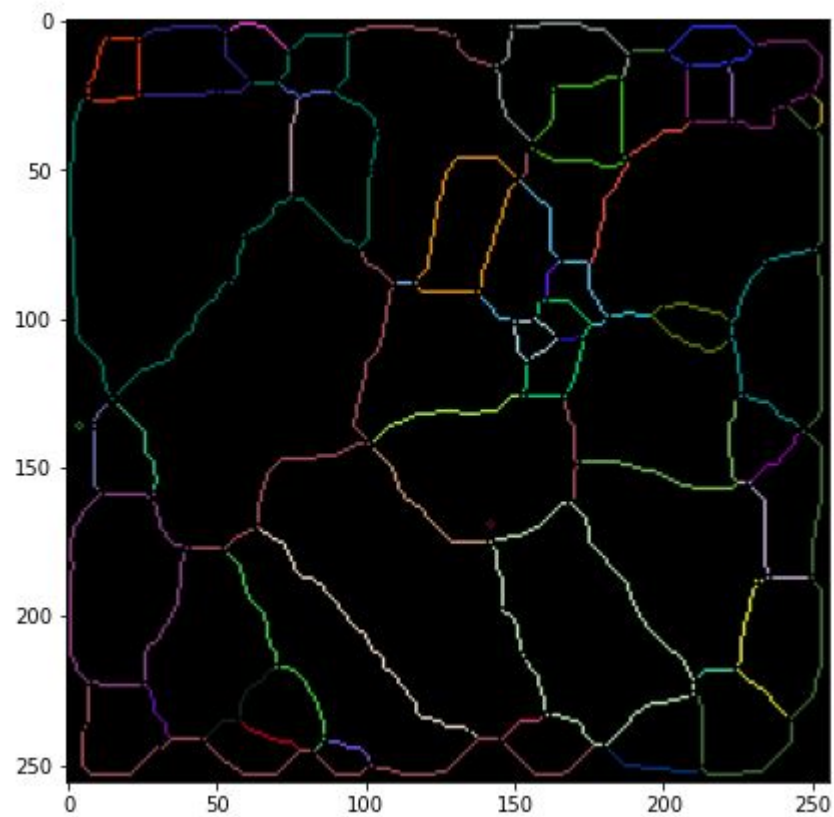
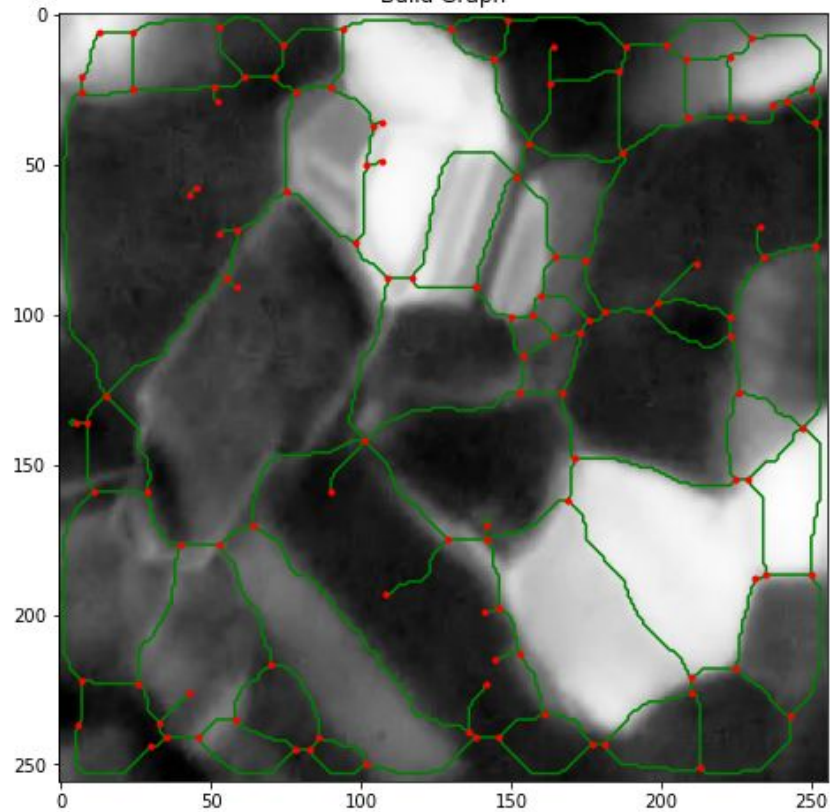
Mask generate by n/w

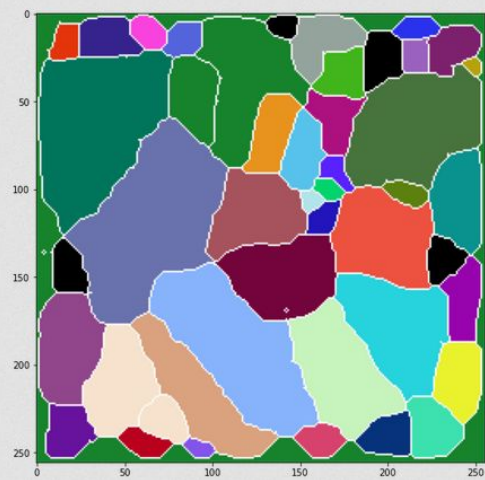
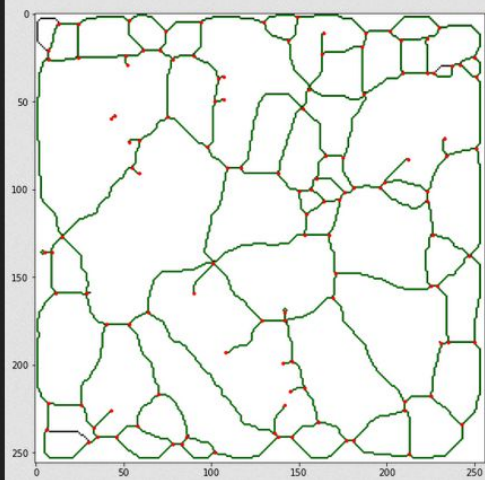
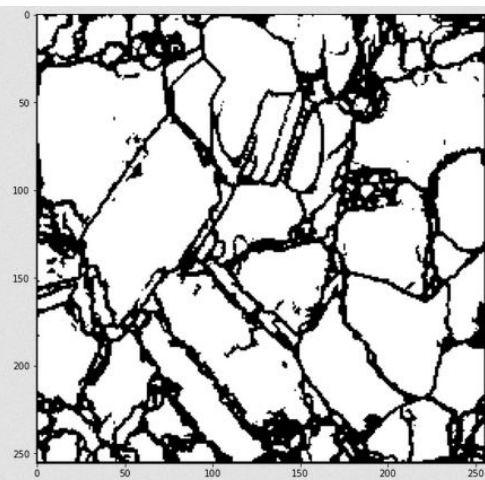
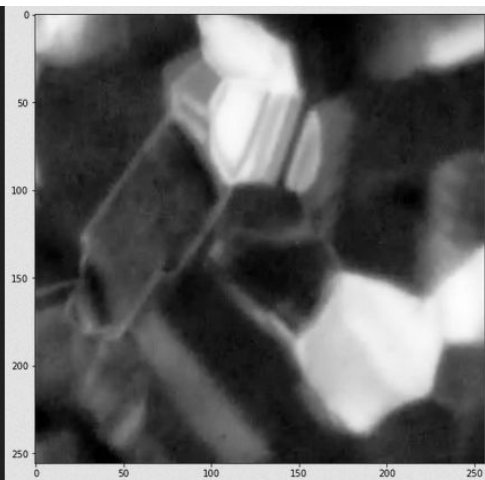


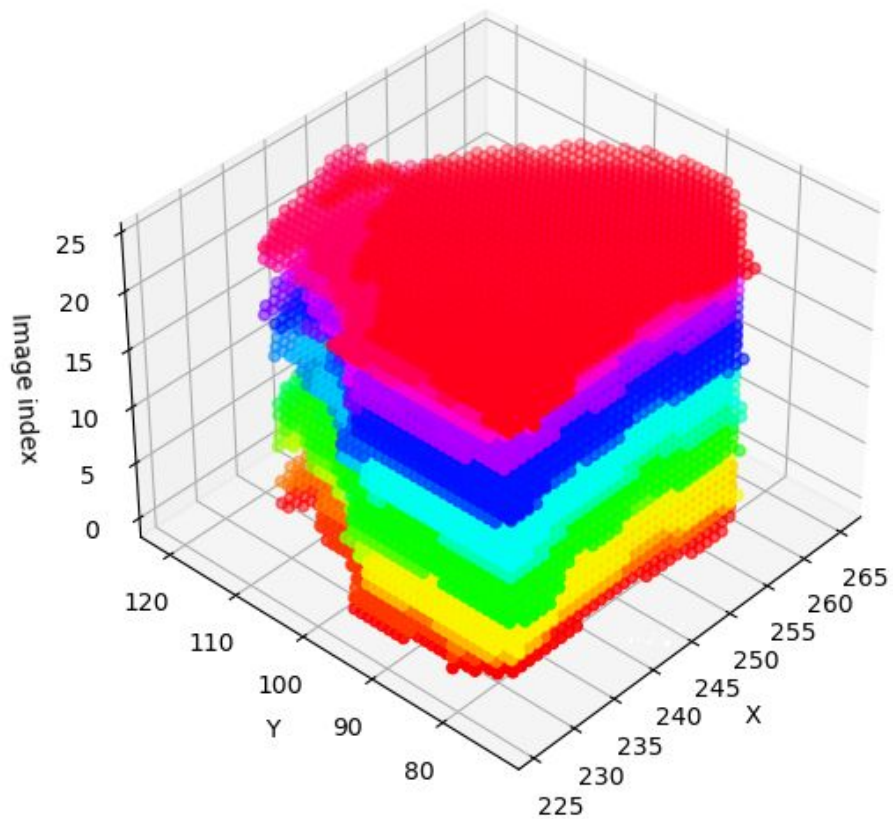
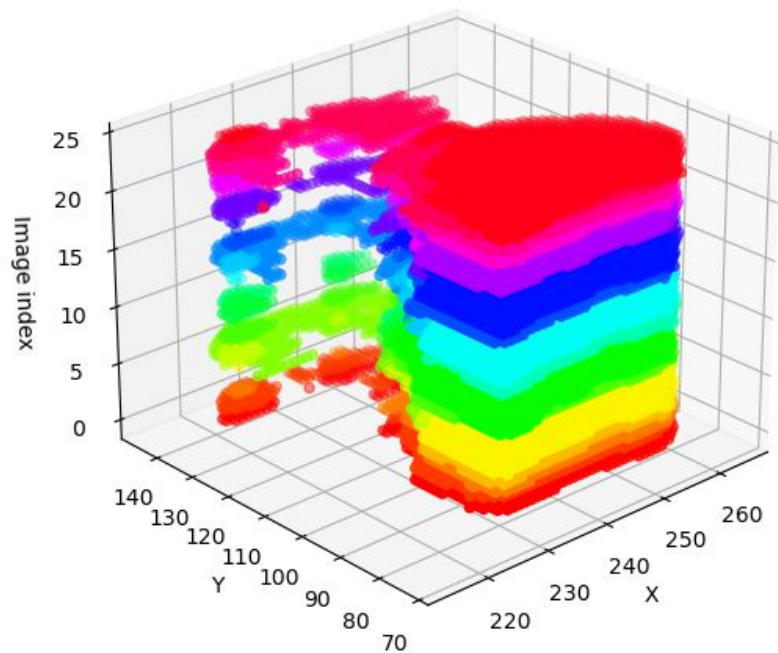
Mask after dilation and skeletonize



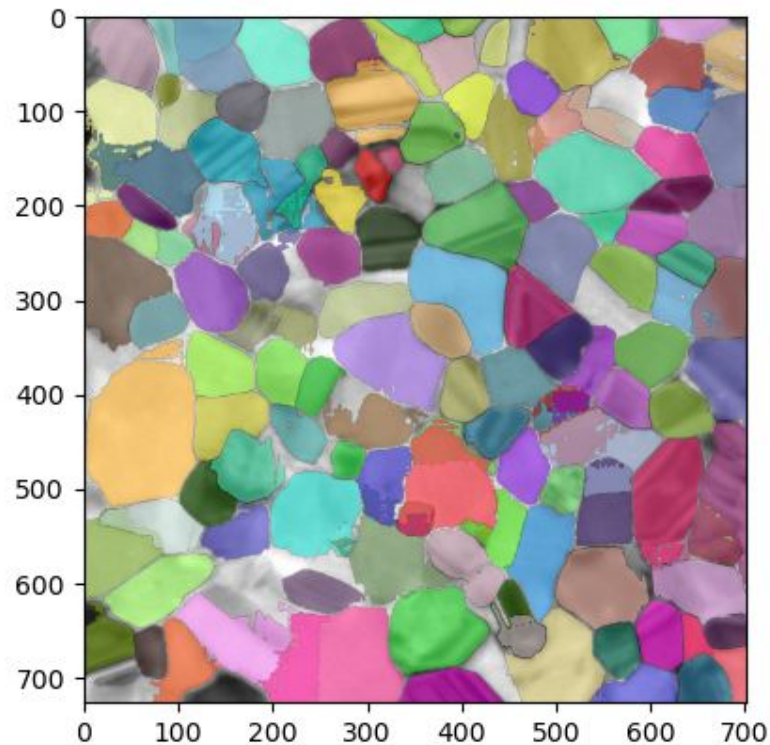
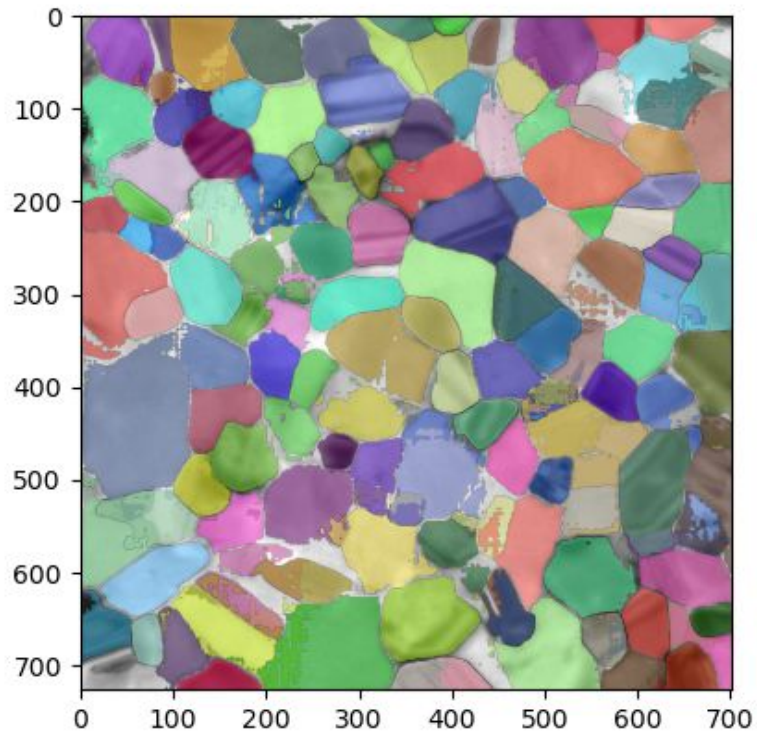
Build Graph



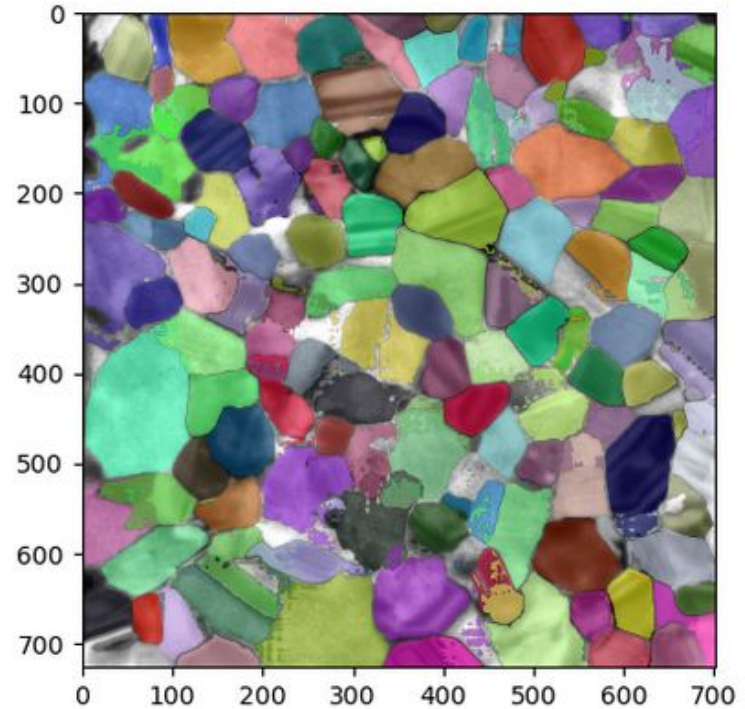
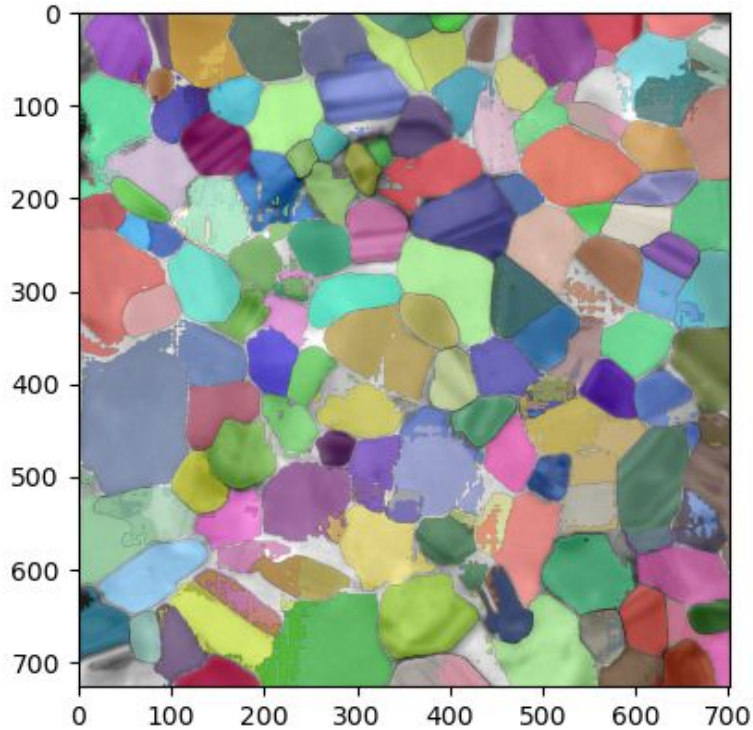




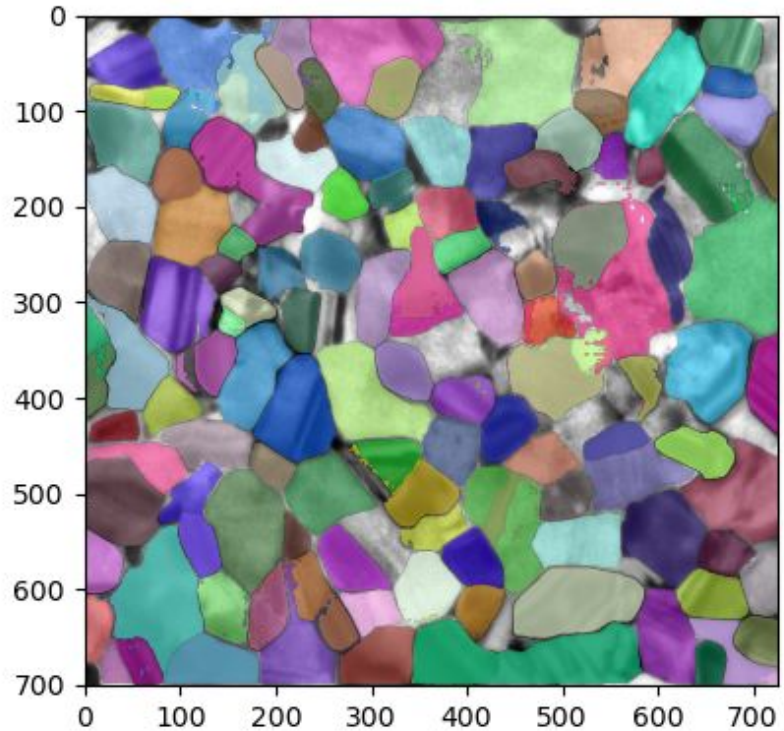
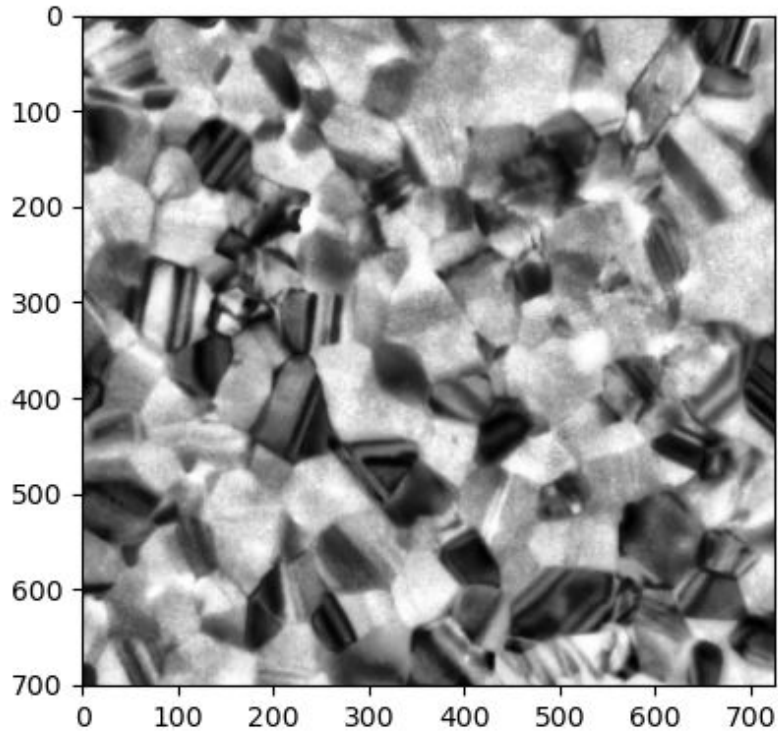
After removing disjointed points



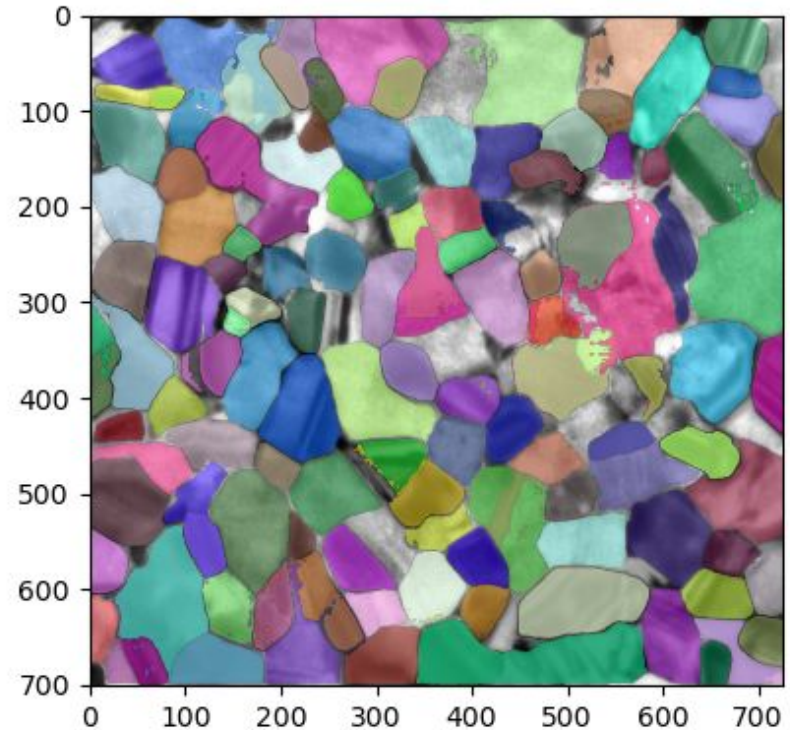
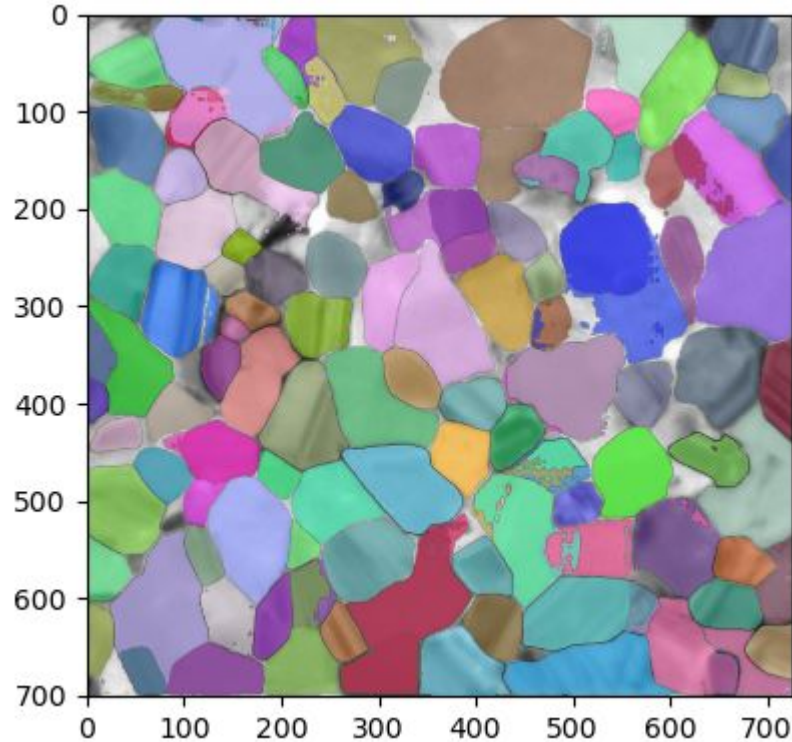
After doing histogram equalization with negative labels



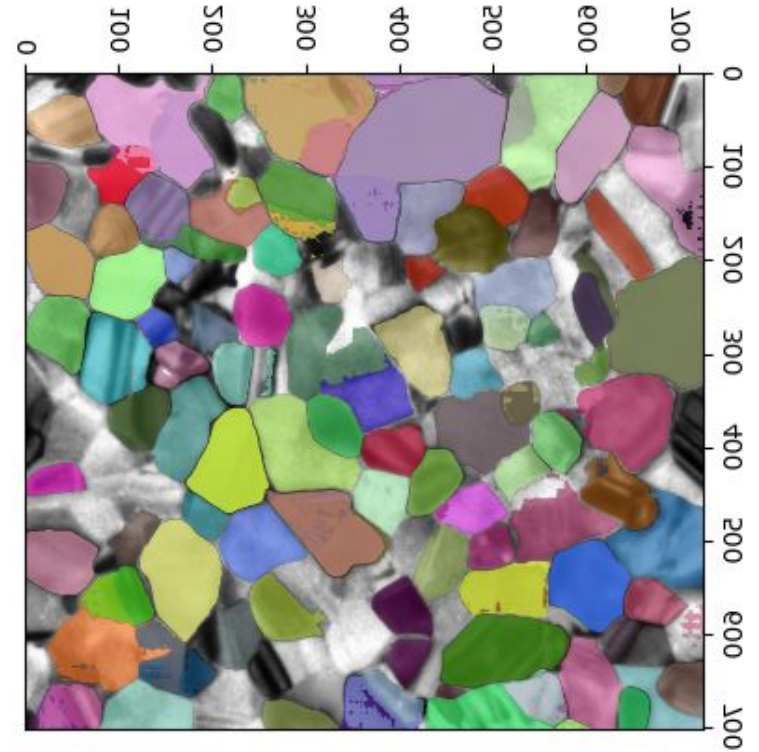
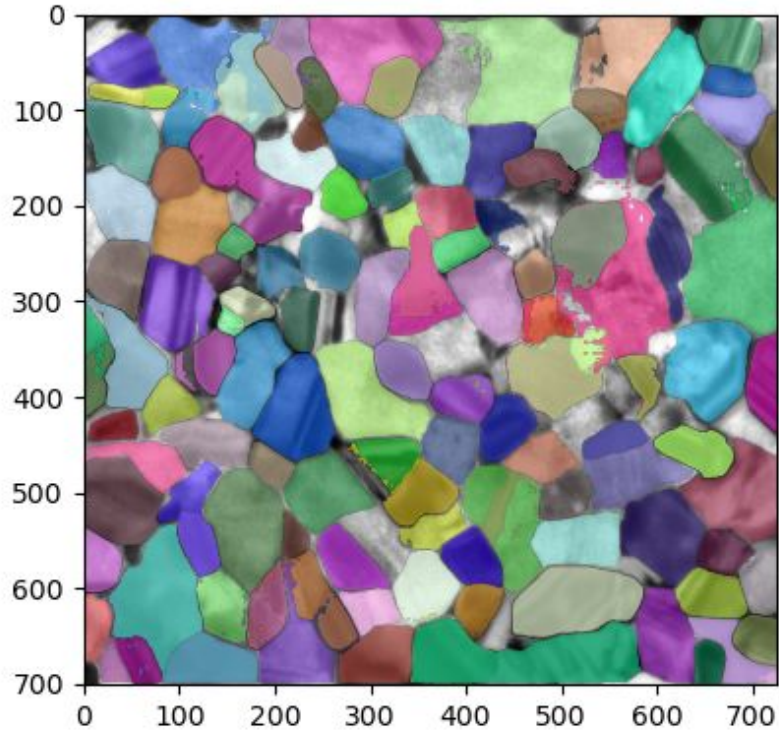
With histogram equalization



Before and after histogram equalization



With histogram equalization and mode



Histogram equalization->removing disjoint->mode

