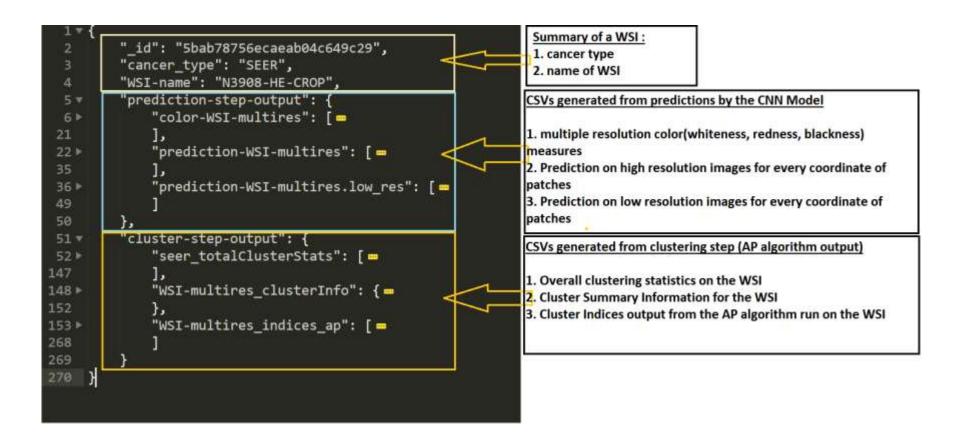
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Overall SEER JSON Structure

The complete JSON file is available here in Github. SEER.json



Prediction Output Structure Explained

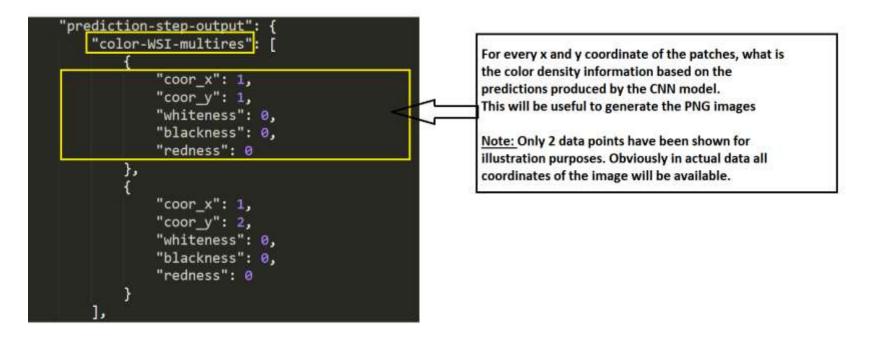
These outputs reside in the following folder structure:

<TIL root>/data/heatmap_txt/

<TIL root>/cluster_indices/input/seer

Color -WSI-MultiRes explained

It tells whether a portion of the image is background or tissue. It is statistically computed, not generated by the model.



Prediction -WSI-MultiRes and low resolution explained

```
"prediction-step-output": {
           "color-WSI-multires": [
8 *
             { -
             },
21
           "prediction-WSI-multires": [
                                                                      Each unique combination of X and Y value in
                                                                      every record represents a 100 X 100 pixels
               "patch index x": 99,
                                                                      patch.
               "patch_index_y": 99,
               "lymphocyte pred": 0,
                                                                      The corresponding TIL/Lymphocyte prediction
               "necrosis_pred": 0.00722075533122
                                                                      and Necrosis Prediction is given for every
29
                                                                      patch once the CNN prediction model has
30
                                                                      executed and generated these outputs.
               "patch_index_x": 99,
               "patch_index_y": 296,
               "lymphocyte_pred": 0,
               "necrosis_pred": 0.00555958598852
          "prediction-WSI-multires.low res": [
38 =
               "patch_index_x": 392,
               "patch_index_y": 392,
40
               "lymphocyte_pred": 0,
               "necrosis pred": 0.004871
```

Cluster Output Structure Explained

Cluster Index Step CSV outputs are available here:

<TIL root>/cluster_indices/output/<cancer-type>

<TIL root>/cluster_indices/output/seer

Overall cluster statistics output

```
"cluster-step-output":
   "seer totalClusterStats"
           "Slides": "N3908-HE-CROP-multires.csv",
           "number of data points": 363,
           "number of clusters": 4,
           "Ball Hall": 727.033492228104,
           "Banfeld_Raftery": 2335.98088004097,
           "C index": 0.0335152159541665,
           "Calinski Harabasz": 968.214411749257,
           "Davies Bouldin": 0.430478646107358,
           "Det Ratio": 59.3988774907265,
           "Dunn": 0.052702797742987,
           "Gamma": 0.917867183685303,
           "G plus": 0.0164737177128835,
           "GDI11": 0.052702797742987,
           "GDI12": 0.339330435992321,
           "GDI13": 0.108306441285547,
           "GDI21": 1.28806866834899,
```

This is the first section of the clustering output.

This section represents the overall cluster statistics for each WSI. Some of the fields have been listed, the actual JSON has all the fields available as part of this statistics.

Overall cluster summary information

Cluster Indices output (AP algorithm)

```
"cluster-step-output": {
51 v
52 ≯
              "seer_totalClusterStats": [ -
147
              "WSI-multires_clusterInfo": {-
148 ▶
152
             "WSI-multires indices ap":
153 v
154 v
                      "Slides": "TCGA-05-4396-01Z-00-DX1",
155
                      "Ball Hall": "NA",
156
                      "Banfeld Raftery": "NA",
                      "C index": "NA",
158
                      "Calinski Harabasz": "NA",
159
                      "Davies Bouldin": "NA",
                      "Det Ratio": "NA",
                      "Dunn": "NA",
162
                      "Gamma": "NA",
                      "G plus": "NA",
                      "GDI11": "NA",
                      "GDI12": "NA",
                      "GDI13": "NA",
                      "GDI21": "NA",
168
                      "GDI22": "NA",
169
                      "GDI23": "NA",
170
171
                      "GDI31": "NA",
172
                      "GDI32": "NA",
                      "GDI33": "NA",
173
                      "GDI41": "NA",
174
                      "GDI42": "NA".
```

This section captures the output as part of the clustering indexing step by the AP algorithm:

It is an array of data elements (a subset has been shown for illustration purposes).