SLIC experiments:

Original pic:

A dog sitting in the grass

Description automatically generated with medium confidence

Running SLIC with nsegs = 2, the compactness is not a sensitive factor in this case.

|  |  |  |
| --- | --- | --- |
| compactness |  |  |
| 0.1 | A picture containing dog, sitting, white, mammal  Description automatically generated | A picture containing outdoor, silhouette  Description automatically generated |
| 1 | A picture containing dog, sitting, white, mammal  Description automatically generated | A picture containing outdoor, silhouette  Description automatically generated |
| 10 | A picture containing dog, sitting, white, mammal  Description automatically generated | A picture containing outdoor, silhouette  Description automatically generated |

Running with number of segments = 10; still compactness is not a sensitive factor. However, supplied with larger number of segments, the picture is not segmented properly as desired, even though the color/pattern is very similar across the segments (in this case, the puppy). From this, we know human knowledge of number of segments is important when conducting SLIC.

|  |  |  |  |
| --- | --- | --- | --- |
| compactness |  |  |  |
| 0.1 | A dog standing in grass  Description automatically generated with low confidence | A picture containing dark  Description automatically generated |  |
| 1 | A dog standing in grass  Description automatically generated with low confidence | A picture containing dark  Description automatically generated |  |
| 10 | A dog standing in grass  Description automatically generated with low confidence | A picture containing dark  Description automatically generated |  |

Template search:

Chart, line chart

Description automatically generated

The first 100 matches are almost perfect and correct to what is desired here. While the 500th match gets confused with some pink color in the middle and dark color in the sides, hence yielding a wrong match.

1st:



2nd:



5th:



10th:



100th:



500th:

