

DSAA Project

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Implementation Ideas

We made use of SIFT for matching the slides. A variant of SIFT known as Brute-Force Matcher was used. It takes the descriptor of one feature in first set and is matched with all other features in second set using some distance calculation. And the closest one is returned.

We made use of FLANN based matcher. FLANN stands for Fast Library for Approximate Nearest Neighbors. It contains a collection of algorithms optimized for fast nearest neighbor search in large datasets and for high dimensional features. It works more faster than BFMatcher for large datasets.

Results and Observations

We ran the code on the sample dataset. Following was the output:

0.jpg ppt1.jpg

1.jpg ppt2.jpg

2.jpg ppt2.jpg

3.jpg ppt2.jpg

4.jpg ppt2.jpg

5.jpg ppt1.jpg

6.jpg ppt1.jpg

7.jpg ppt1.jpg

8.jpg ppt2.jpg

9.jpg ppt1.jpg

We observed that matching for 0.jpg and 8.jpg is incorrect. We realized that sift is prone to inaccuracies but gives decent results in majority of the cases (8 / 10 here).