Possible improvements

• Algorithm

Only two algorithm were used: SIFT and ORB. First possible improvement is to try other: AKAZE, SURF, etc.

Neural Network

Second possible improvement is to use deep neural networks for image matching.

But this approach requires fine-tuning on labeled dataset of satellite images and and their keypoints.

• Hyperparameter

Hyperparameters were chosen based on the best practices and advice. So performing hyperparameter search can improve accuracy of image matching.

• Data prerocessing

As main task was to perform image matching of satellite images in different seasons, preprocessing was focused on enhancing details on images. But it still hardly detects keypoints on white spaces of winter images. So fourth improvement is to define preprocessing which will help to highlight low textured areas.