

Improvements:

- First of all, if we really want high-quality results, we should create quite a large dataset to finetune our model. Outdoor weights are trained on some buildings and other objects but definitely not on satellite images.
- Secondly, using just LoFTR architecture could be not enough. A popular solution to this problem is Superpoint+SuperGlue. So we can compare and choose the best. But an even better way would be creating architecture that will combine these two. So we can concatenate keypoints from LoFTR and Superpoint+SuperGlue. Then we can arrange, cluster, etc. (for example, using DBSCAN for clusters). After those operations, extract keypoints again and only then use MAGSAC.
- For season changes, it is actually a tricky problem. First of all, we shouldn't consider photos with a lot of clouds. Secondly, we can't probably do anything about winter. But we can definitely do something about spring, summer and autumn. And I believe that we can apply more methods than just histogram matching.

All in all, these changes can improve performance significantly