

Possible improvements

1. It would be beneficial to test alternative keypoint detection algorithms. Further investigation into alternative keypoint detection and description algorithms, such as SIFT, SURF, KAZE, FAST, BRIEF, and ORB, could result in more accurate and efficient image matching. Comparative testing of these methods will assist in identifying the approach that most effectively captures the distinctive features of satellite imagery.
2. It is recommended that full-resolution images be used. While resizing images can reduce computational resources, it also results in a loss of detail. By working with the original image sizes, the model can access more granular information, which could improve the precision of image matching, especially for fine details relevant to deforestation patterns or seasonal changes.
3. Machine learning techniques such as convolutional neural networks (CNNs) or deep learning models can be used to significantly improve the comparison results. Such models are capable of learning more complex patterns in the data, which could result in more accurate detection of subtle seasonal or environmental changes between images.