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The steps of the image mosaic process are mainly as follows:

- 1) Pre-processing : First read the feature points coordinates from the position txt file, then read sample images and assign points with corresponding images. The image is stored in the Image struct, which has name and image members. The Image.image is the matrix of every image.
- 2) RANSAC : For every point in every image, compare its RGB value with the given points in the next image. If two points are close enough in RGB value, put the point in the candidate pool to calculate the translation. Then for every original point, choose one point in the pool and calculate the translation vector. If there are other corresponding points in two images that can be represented by the vector, count the number of such points. Then choose the vector that more than 3 points fall in or that most points fall in and that will be the translation vector $T_{i,i+1}$ between two adjacent image i and $i+1$.
- 3) Image-Mosaic : Set the first image as the world frame image, and the translation vector between image 1 and image i would be the sum of translation vectors from 1 to i . Then we can translate image i back to image 1.