## Experiment 0: Image Selection

In order to get sample images to use for these experiments I took 16 pairs of photos in a variety of circumstances, varying the content, amount of rotation and some were taken using planar movement. These were all taken by hand without a tripod to accurately perform exact rotation, but should as a result have some good variation. FLANN based feature matching was used for the sake of time.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  | Matches | Good Matches (0.8 knn) | Result(RANSAC 3) | Good match % |  | | A | 42540 | 6652 | Success | 15.64% | Use | | B | 62979 | 1863 | Success | 2.96% |  | | C | 32960 | 2675 | Success | 8.12% |  | | D | 16366 | 578 | Failure | 3.53% |  | | E | 17705 | 692 | Failure | 3.91% |  | | F | 32694 | 4086 | Success | 12.50% | Use | | G | 43251 | 4145 | Success | 9.58% |  | | H | 35958 | 808 | Failure | 2.25% |  | | I | 31796 | 2073 | Success | 6.52% | Use | | J | 37941 | 2817 | Success | 7.42% |  | | K | 49266 | 1904 | Success | 3.86% |  | | L | 47278 | 5530 | Success | 11.70% |  | | M | 69708 | 1074 | Failure | 1.54% |  | | N | 64848 | 4680 | Success | 7.22% |  | | O | 54588 | 6182 | Success | 11.32% | Use | | P | 7840 | 1370 | Success | 17.47% | Use | |  |  |  |  |  |  |  |  |

From this data I have selected 5 pairs to use with the goal being a wide range of starting point performance. B and K were considered as low points, but the resulting final mosaic was of low quality due to the second image being stretched to be an order of magnitude larger to line up with the first so in place of this set “I” will be used as a low point that did ultimately result in a good mosaic. P was selected as it was visually one of the best mosaics despite having relatively few good matches. A, F, O were selected for their high number of good matches relative to total matches and comparatively good visual results in the final mosaic, my hope is that this will yield more interesting data in the experiments. From here on these images will be referred to as A,B,C,D,E in the order they appear, and the rest of the images will be discarded.