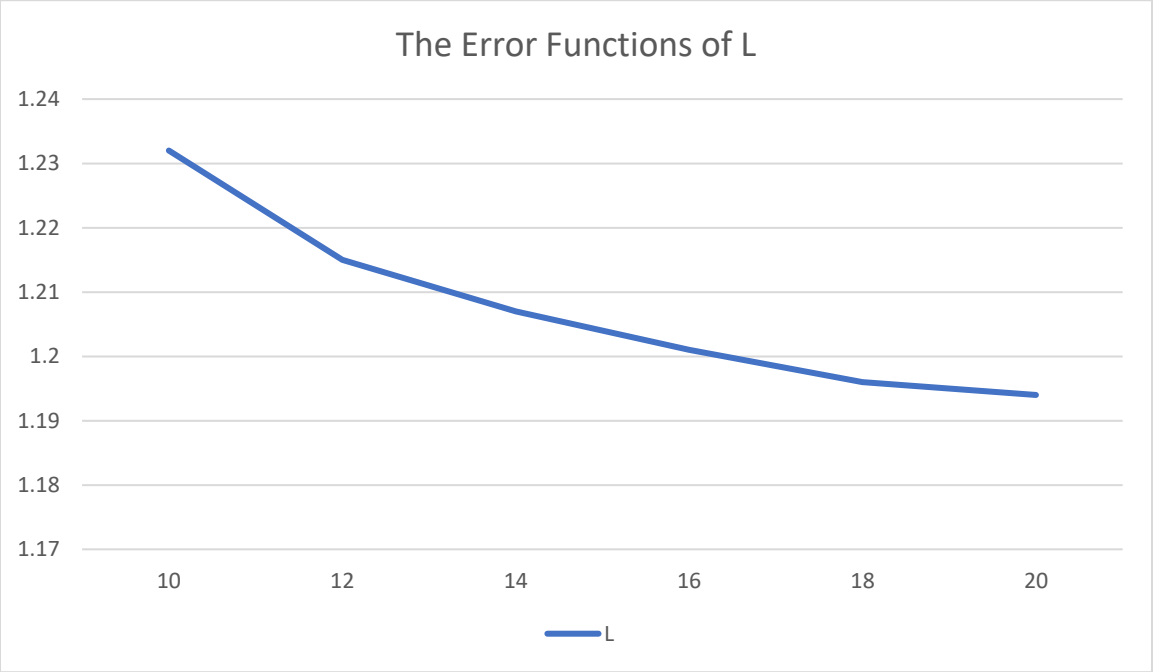
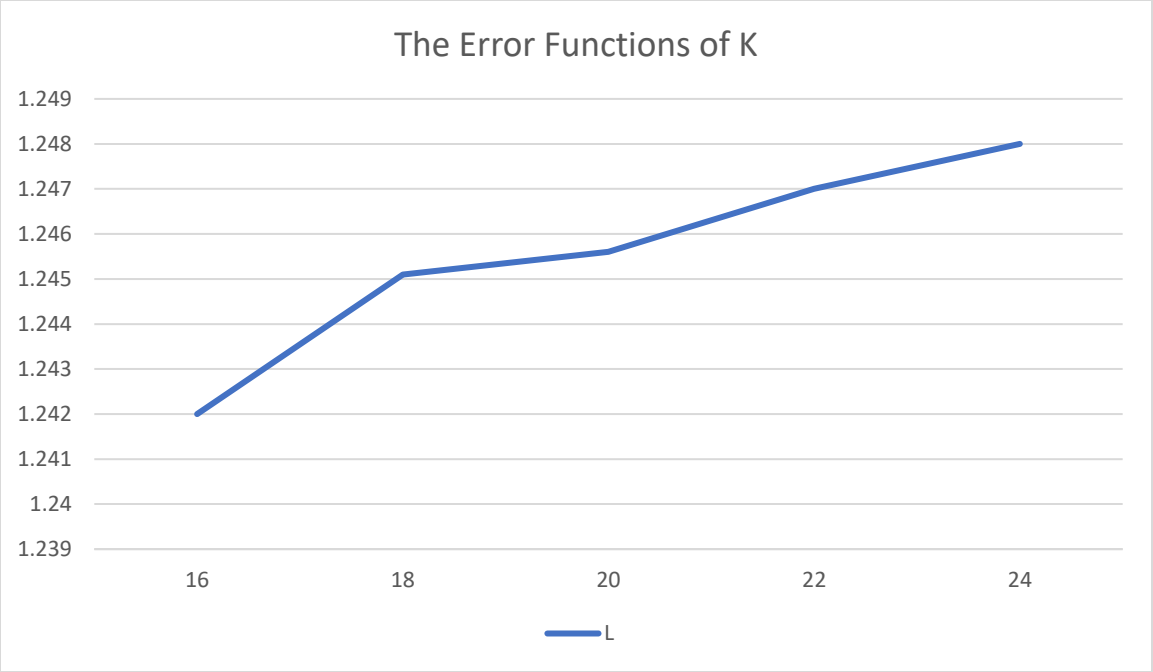
1. **For each of the image patches in columns 100, 200, 300, ..., 1000, find the top 3 nearest neighbors (excluding the original patch itself) using both LSH and linear search. What is the average search time for LSH? What about for linear search?**
   Average search time for LSH: 36.47 secs
   Average search time for Linear search: 42.19 secs
   Theoretically, average search time for LSH must be way faster than average search time for linear search. However, I implemented logical hashed buckets instead of actual hashed buckets, so it's hard to see a significant difference from the average search time.
2. **Plot the error value as a function of L (for L = 10, 12, 14, ..., 20, with k = 24). Similarly, plot the error value as a function of k (for k = 16, 18, 20, 22, 24 with L = 10). Briefly comment on the two plots (one sentence per plot would be sufficient).**



As the function of L increases, error rate decreases.

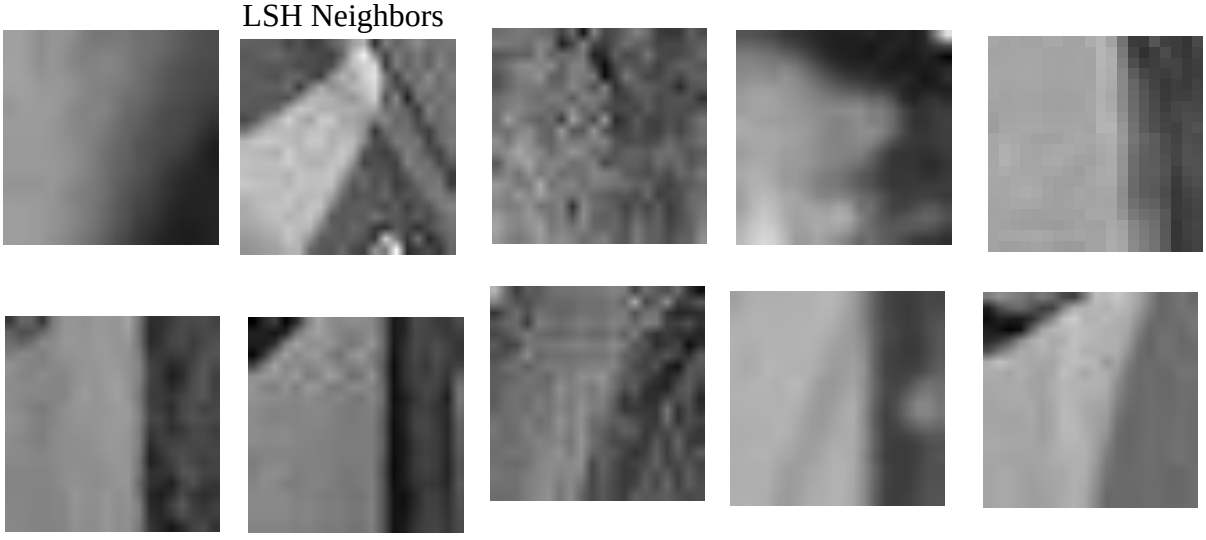


As the function of K increases, error rate increases.

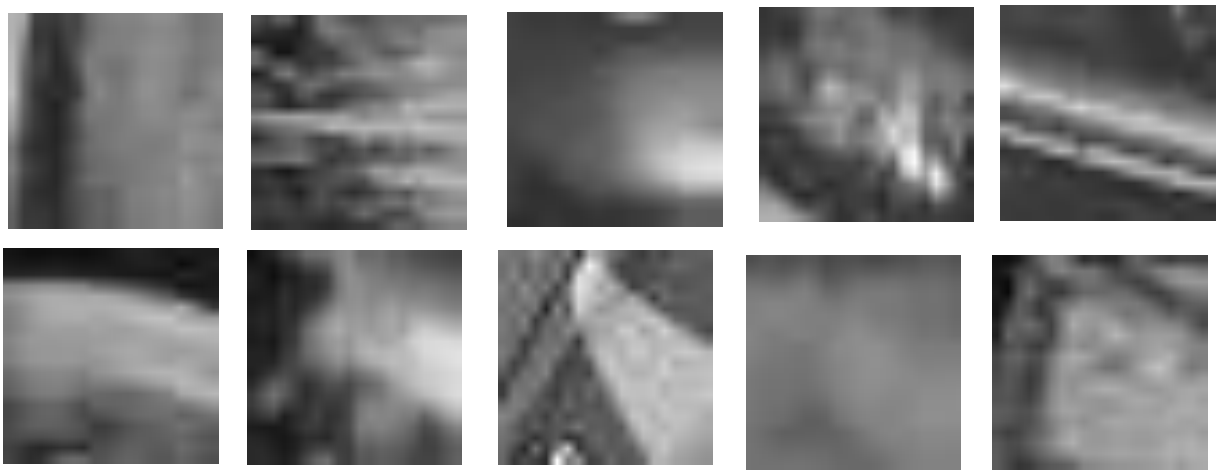
3. **Finally, plot the top 10 nearest neighbors found 6 using the two methods (using the default L = 10, k = 24 or your alternative choice of parameter values for LSH) for the image patch in column 100, together with the image patch itself. You may find the function plot useful. How do they compare visually?**

Row 100

LSH Neighbors



Linear Neighbors



I have seen some similar neighbors from A and B.