CS754 Assignment-5

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Declaration: The work submitted is our own, and we have adhered to the principles of academic honesty while completing and submitting this work. We have not referred to any unauthorized sources, and we have not used generative AI tools for the work submitted here.

Question 1
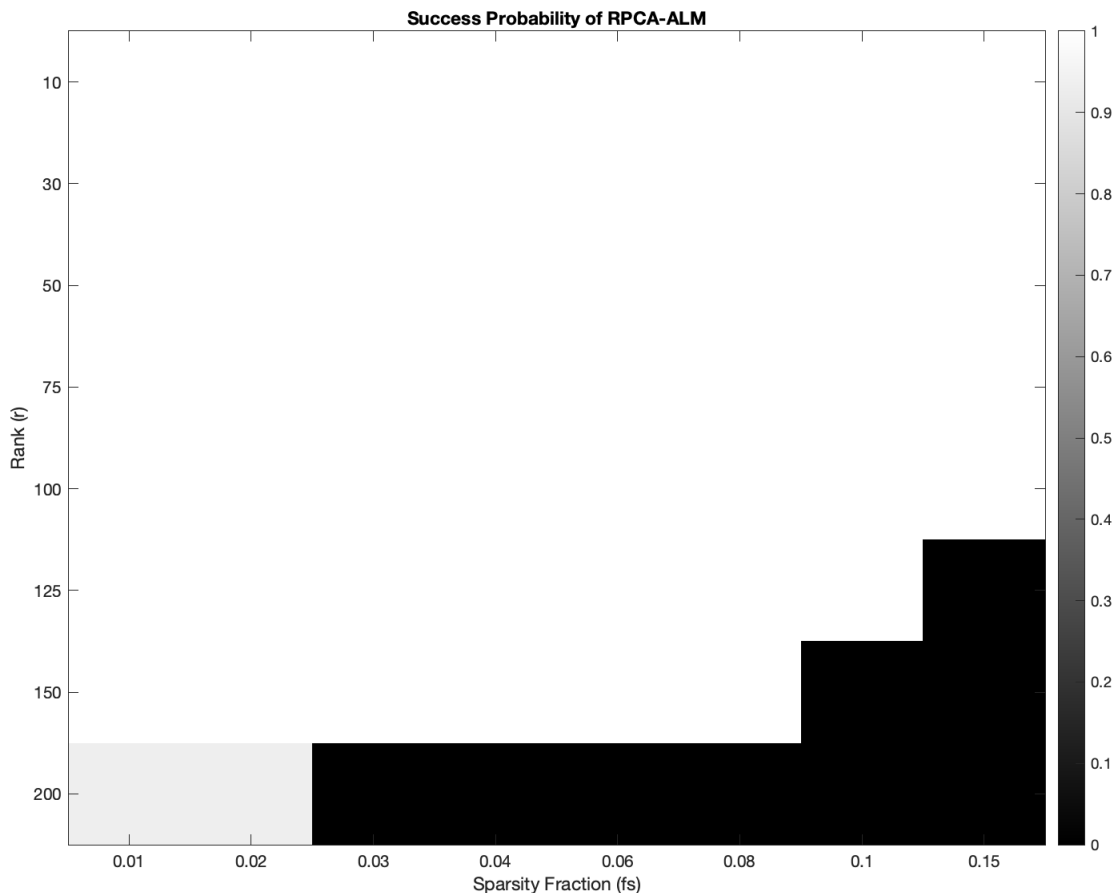
Solution

Here is the success probability image:

Figure 1: Success Probability Heatmap

As we can see, mostly we are able to get a success of 1 for all 15 iterations, however for higher sparstiy fractions, or larger rank, we get lower success too. It also depends on the number of

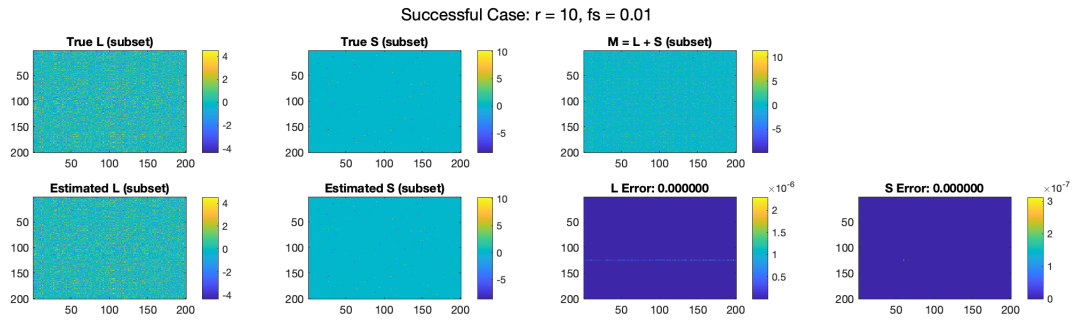iterations for which we run our algorithm.

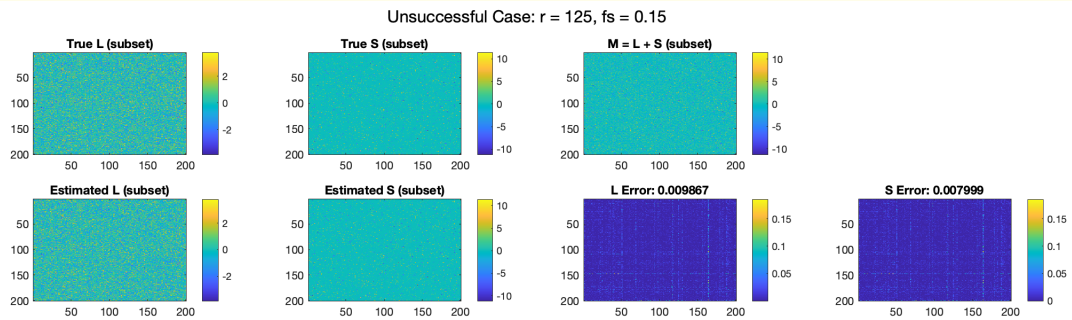Figure 2: Sucessful case

The above shows one of the successful cases.

Figure 3: Sucessful case

The above shows one of the unsuccessful cases.

As we can see in the unsuccessful case, there is a lot of noise in L, and the error is larger enough.