15-400 Project Milestone Report 4

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1 Milestone outlined in report

In my report, I said we would "Work on improving the basic algorithm for difficult instances with different variations based on what we learned."

In the last milestone, I amended this to indicate continuing to make progress on the last milestone and characterize these instances/generalize our current algorithm.

2 Current Progress

2.1 Accomplishments:

We're exploring a different method of identifying cliques, that relies on the regularity of cliques while incorporating subsampling approach from before. We exploit the regularity of a clique, and the fact that whenever we sample from a clique we are still left with a smaller clique. We're working on analyzing this method of subsampling and counting to see if it is reliable on any type of graph.

2.2 Meeting my milestone:

We've adapted our approach to fit a different type of graph, which is what we set out to do from last week.

2.3 Looking Ahead:

We've been looking at special graphs, and should start to look at more general graphs and apply what we've learned.

2.4 Changes/Surprises/Revisions/Resources Needed:

We need to work on generalizing what we know to other graph instances and types.