

15-400 Project Milestone Report 5

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March 20, 2019

1 Milestone outlined in report

In my report, I said we would "Work on establishing a lower bound for the variation we choose to work on (multi-pass, certain type of graph)"

In the last milestone, I amended this to saying that we need to work on generalizing what we know to other graph instances and types.

2 Current Progress

2.1 Accomplishments:

We've figured out how to identify a clique using its regularity and the subsampling technique similar to the techniques that we've used to characterize other graphs. We're trying to see if this method extends to bipartite complete graphs as well. In general, we know that certain graphs are harder to identify than others. We're focusing more on determining what makes a graph easily identifiable in a streaming setting, and if the method of subsampling works with slight modification in these situations.

2.2 Meeting my milestone:

We generalized our approach to complete graphs, but are still working on characterizing these types of graphs.

2.3 Looking Ahead:

We'll continue to try to characterize these easy instances by looking at bipartite graphs.

2.4 Changes/Surprises/Revisions/Resources Needed:

While working on this problem, we've noticed that trying to determine the "easy" instances is itself a difficult problem, and we want to focus more on answering that question fully.