

# 15-300 Milestone (Fall)

<https://j-b-z.github.io/>

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## 1 Milestone progress

My initial milestone goal was to gain insight on the five proposed open questions, select three among those to pursue, and read the assigned papers.

I was able to explore superficially each problem. Afterwards, I met with Professor Shah to revisit the project proposal and discuss the problems. Among the five questions, we chose two questions to pursue: the relation between graph conceitedness and efficient strategyproofness, and a statistical approach to efficiency. Furthermore, I was able to complete the readings assigned, although I have yet to discuss with Professor Shah.

The biggest surprise so far was that one of the proposed questions (specifically alternate definitions to strategyproofness) was a non-problem and simple to solve.

## 2 Changes

After discussing with Shah, I am now pursuing two problems instead of the initially proposed three. Furthermore, since these problems are now determined, I will be able to set more concrete steps for solving the problems in the future. Regarding milestones, Professor Shah suggested approaches to the problems for me to explore. Specifically, I should try to solve the graph connectedness negative result via some sort of induction. Furthermore, Shah suggested that I focus on a problem initially and then switch routinely to the other problem.

**Week 2:** Explore induction for strengthening negative results for connectedness and strategyproofness.

**Week 4:** Read papers on statistical definitions of efficiency and discuss with team.

Afterwards, the milestones remain relatively the same, since the timeline still remains rather abstract.

## 3 Resources

I will not require any additional resources.