Evaluating Incentives in Crowdsourcing using Games

Semester project

1 Description

Crowdsourcing is a method to obtain services or elicit information from a large group of people, usually an online community, and is suitable for a large scope of judgmental tasks easily solved by humans, such as, image labeling, content recognition, etc. One of the key challenges in crowdsourcing is how to motivate individuals to participate, and moreover, provide quality services and accurate information. While there are numerous theoretical concepts developed to elicit private information and effort [1, 2, 3], there is a lack of experimental evidence that these mechanisms are applicable to crowdsourcing scenarios [4].

The goal of this project is to evaluate various mechanisms using gamification, a technique of applying games in a non-game contexts. The basic idea is to design a multiplayer game that realistically represents a crowdsourcing scenario, and use it as a platform to perform experiments. Once the game is designed and implemented, a user study can be conducted to address several issues, including effectiveness of different payment schemes and their resistance to collusive behavior. The exact form of the game is left to be discussed, and students are encouraged to come up with their own ideas.

2 Tasks

- Design and implement a multiplayer game that corresponds to a crowdsourcing scenario

- Conduct a user study to evaluate various effort elicitation mechanisms

3 Skills

- Programing skills in Java and some experience in web development

- Some knowledge in probability and statistics

4 Benefits

- Learn about mechanism design

- Understand the challenges of the crowdsourcing environment

References

[1] N. Miller, P. Resnick, and R. Zeckhauser. Eliciting Informative Feedback: The Peer-Prediction Method. *Management Science*, 51, pp.1359-1373, 2005

[2] D. Prelec. A Bayesian Truth Serum for Subjective Data. *Science*, 34, pp.462-466, 2004

[3] A. Dasgupta and A. Ghosh. Crowdsourced Judgement Elicitation with Endogenous Proficiency. Proceedings of the 22nd international conference on World Wide Web, pp. 319-330, 2013

[4] X. A. Gao, A. Mao and Y. Chen. Trick or Treat: Putting Peer Prediction to the Test. *Workshop on Crowdsourcing and Online Behavioral Experiments, in conjunction with ACM EC13*,2013.