

## ECS 193AB Winter/Spring2017

### Software Framework to diminish the market-power imbalance in the Gig Economy

**Context:** The Gig Economy, where individual customers deal with individual service providers to pay for and obtain a service, is primarily controlled by the middle-men who “make the market”, viz., clear the market by matching providers with consumers. The market-makers, or middlemen, have enormous power, since they have all the information about where the customers are, where the providers are, and what the reputation scores of each is. Asymmetric information in the market is asymmetric market power. This highly asymmetric power leads to very large profit margins, and thus diminished pay off for providers, and higher prices for consumers than need be.

**Goal:** The goal of this project is to develop a general-purpose software framework to enable both service providers and service providers to organize to gether, and either, eliminate or diminish the power of the middleman. We will build the software and release it open-source, under the BSD License.

Some possible use cases:

1. Because the software is available free, and maintained by community, Any group of service providers (drivers, meal providers, housing providers, e.g., drivers in Datong, Shanxi in China) could form a non-profit co-op and provide the service themselves, using the free software, and share the profits, thus cutting out the middleman. They could operate the free software themselves, or hire someone to do it. They could voluntarily share the reputation scores for service providers and service consumers with other non-profit coops. For example, the Datong driver co-op could share passenger reputation with the driver co-op in Suzhou in Anhui province, since there is no competition; but sharing this reputation score would be helpful for people traveling from Shanxi to Suzhou.
2. “Collective Labour or Consumer Actions” (CLA) For example, groups of drivers who work with a typical for-profit middleman to provide a ride service at Bombay Airport might form an instant, location-dependent, temporary, reputation-based union, and go on a time-limited and location-limited CLA (aka “strike”) at peak hours, and demand that the middle-man pass along more of the profits from surge pricing down to them. Customers might form a similar union and demand lower surge prices. Either could prevent the market from clearing until the middleman surrenders some of their profit margin. By participating in more successful CLAs, both providers and consumers gain reputation.

**Conclusion:** The Gig economy as it currently operates in rather asymmetrical in terms of market power, which is largely driven by software. The goal here is to create open-source software to equalize this market power.

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