Pricing Problems in Online Markets

Chaolun Xia
Dept. of Computer Science

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Abstract

Internet Economy includes various online markets with billions of transactions. We study pricing problems in such markets.

In advertising markets, the advertisers are interested in showing ads to users with specific, high tuned attributes. We crawled pricing data from LinkedIn and Facebook, and show that prices to show ads to users with different attributes vary a lot. We design targeting strategies to help advertisers reach more target audience, with provable performance. We also design revenue-maximizing pricing mechanisms that prevent arbitrage.

In online labor markets with multiple workers and tasks, a worker has possibly several skills and a task requires a worker with a certain skill. For example, a task of software development may require a worker with at least 5 years of C++ experience. We propose truthful stable pricing mechanisms to not only meet market owners needs on revenue but also ensure the fairness for workers and task owners.

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