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Title: «What can a click really reveal? Quantifying the utility and privacy effects of a click »

Abstract:

Recommenders are becoming one of the main ways to navigate the Internet. They recommend appropriate items to users based on their clicks, i.e., likes, ratings, purchases, etc. These clicks are key to providing relevant recommendations and, in this sense, have a significant utility. Since clicks reflect the preferences of users, they also raise privacy concerns. At first glance, there seems to be an inherent trade-off between the utility and privacy effects of a click. Nevertheless, a closer look reveals that the situation is more subtle: some clicks do improve utility without compromising privacy, whereas others decrease utility while hampering privacy.

This talk presents the Click-advisor, a visual user-aware clicking platform that helps users decide whether it is actually worth clicking on an item or not (after evaluating its potential utility and privacy effects using our techniques). Using a game-theoretic approach, we highlight in particular what we define as a smart strategy, leading to a Nash equilibrium, where every user reaches the maximum possible privacy while preserving the average overall recommender utility for all users.