

Tensor bandits for online interactive recommendation

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Abstract: Traditional static recommendation system assumes the user's preference over the item does not change over time. In many recommendation domains such as Youtube video recommendation or news recommendation, users constantly interact with the system with dynamic preference, and user feedback is instantly collected for improving recommendation performance. In these settings, it is essential for the recommendation method to adapt to the shifting preference patterns of the users. Other than the dynamic, the growing availability of data provides a unique opportunity for decision-makers to efficiently develop multi-dimensional (aka tensor) decisions for individuals. In this talk, I will discuss multi-armed bandit methods for online interactive recommendation with multi-dimensional actions.