

Introduction to Recommender Systems

Coursera <https://www.coursera.org/course/recsys>

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Session: 3 Sep 2013

(14 weeks long)

Notes taken by
github.com/traims

1 Basic product association recommenders *Video 2.1*

Which product to buy with a product X ? We consider *non-personalized* recommendations, which are the same for every user looking at a particular product.

1.1 Looking for things that co-occur

We know that a person bought X . Which product Y to recommend?

The simplest way to compute the ranking of a product Y :

percentage of X -buyers who also bought Y : $\frac{\text{people who bought both } X \text{ and } Y}{\text{people who bought } X}$

When it doesn't work: in a supermarket, almost everyone buys bananas—that doesn't mean that we should recommend buying bananas to accompany every product.

1.2 Looking where opinions diverge from the community average

We know that a person bought X . Which product Y to recommend?

Let $\neg X$ be the case when the user did not buy the product X . Let's look whether X makes appearance of Y to be more likely than in the case of $\neg X$.

Ranking of a product Y : $\frac{\frac{X \text{ and } Y}{\neg X \text{ and } Y}}{\neg X}$

This excludes bestsellers from our recommendations.