On-line shopping provides the means for a business to present a vast number of products to consumers. In order to increase sales, it is desirable to present a focused list of “recommended” products to a user that the user would be interested in purchasing. To create a list of recommended products, the historical purchase history and user demographics need to be processed.

This presentation provides an in-depth analysis of the inner-workings of a recommender called “co-occurrence”. This type of recommender is simple, yet it is powerful enough to be used for various applications. This presentation leads by way of example to show the various steps used to create a recommendation system. Once the co-occurrence matrix is computed, two different styles of system can be developed: (1) an individual recommender that takes the current user items and creates a recommendation for the current products, and (2) a search engine recommender that finds surprising relationships between items and presents them as additional items in a search response. The co-occurrence recommender can provide cross-recommendation (i.e. browsing movies can recommend music) and can be extended for streaming recommendations (matrix is updated as each new item arrives).

Spend a little time coming up to speed on the core technologies of a recommender system and think about how to reach your customers!