**Künstliche Intelligenz im Online-Handel 1**

**Abstract 0.5**

**Einleitung 2**

**Recommander System**

**1.1 Collaborative Filtering Recommendation**

* **User-Based&Item-Based -- Wang Zhaoxi**
* **Matrix Factorization -- Zhu**
* **KNN**

**1.2 Machine learning and collaborative filtering**

* **KMeans**

**1.3 Deep Collaborative Filtering**

* **Auto-encoder**

**Schluss 1**

What I(Zhu Bozhen) Wanna write under those titles are:

1. -> Introduction to Collaborative Filtering Recommendation, used-based
2. -> How to generate a user-item-matrix (Matrix Factorization,SVD etc.)
3. -> How to deal with a large number of infomations(KNN)
4. -> How to deal it without noted, cleaned tags(Kmeans) [Unsupervised study]
5. -> How to generate those hidden vector/implicit matrix with neural network

**Künstliche Intelligenz im Online-Handel**

**1 Recommander System**

It is important for users to accurately recommend the content they want to browse, so for a service provider, it is necessary to design an efficient and accurate recommendation system. I want to introduce a commonly used recommendation system algorithm in this seminar: collaborative filtering algorithm, and introduce how this classic algorithm has been improved after the use of AI.

**1.1 Collaborative Filtering Recommendation**

Collaborative filtering is a typical method of using collective wisdom. To understand what is Collaborative Filtering (CF), first think of a simple question. If you want to watch a movie now, but you do n’t know which one to watch, what would you do? Most people will ask friends around them or neighborhoods in a broad sense to see if there are any good movie recommendations recently, and we generally prefer to get recommendations from friends with similar tastes. This is the core idea of collaborative filtering. As shown below, how much information can you see from the picture?

**1.2 Machine learning and collaborative filtering**

* **KMeans**

**1.3 Deep Collaborative Filtering**

* **Auto-encoders**
* **stacked denoising autoencoders**