Literature Review for Smart Fashion Recommender Application

Year	Recommendation System Approach	Properties
Before 1992	Mafia, developed in 1990	• Content filtering. • Mail filtering agent for providing a cognitive intelligence-based service for document processing.
1992 to 1998	Tapestry, developed in 1992	• Collaborative filtering. • Developed by Palo Alto. • Allowed users only to rate messages as either good or bad product and service.
	Grouplens, first used in 1994 Movielens, proposed in 1997	• Rate data to form the recommendation. • Useful to construct a well-known dataset.
1999 to 2005	PLSA (Probabilistic Latent Semantic Analysis), proposed in 1999	• Developed by Thomas Hofmann. • Collaborative filtering.
2005 to 2009	Several Latent Factor Models such as Singular Value Decompositions (SVD), Robust Singular Value Decomposition (RSVD), Normalized Singular Value Deviation (NSVD).	• Collaborative filtering approach. • Find out factors from rating patterns.
2010 to onwards	Context-aware-based, instant-personalization-based	• Combined techniques of content and collaborative approach.

References

1. McAuley et al. [1] devised a parametric distance transformation that assigns a lower distance to garment pairings that fit well than to those that do not. And provided Image-based recommendations on styles and substitutes.

2. Hu et al. [2] conducted a preliminary investigation into personalised outfit recommendation. To describe the user-item and item-item interactions, a functional tensor factorization method was presented. They proposed A functional tensor factorization approach.

3. Veit et al. [4] learned feature transformation for a compatibility measure between pairs of objects using a Siamese CNN architecture. All of these works focused solely on the compatibility of two things. Furthermore, they simply modelled broad matching criteria and ignored the issue of personalisation.

4. Thombre in [3] used image segmentation and Kalman filter to realize Human detection and tracking. Orrite-Urunuela proposed a statistical model for detection and tracking of human silhouette and the corresponding 3D skeletal structure in gait sequences [5]. How-Lung [6] provided an outdoor aquatic surveillance system for human motion tracking and detection.

5. Ajmani et al. [7] present a novel method for content-based recommendation of media-rich commodities with the use of probabilistic multimedia ontology. Proposed an ontology based personalized garment recommendation system.

6. Li et al. [8] utilized the HMM of recommended items to match customers' model according to customer data. The second method is the collaborative filtering-based recommendations algorithm. Proposed Content-Based Filtering Recommendation Algorithm.

7. For instance, Nogueira et al. [9] presented a new collaborative filtering strategy that utilizes the visual attention to characterize images and alleviate the new item cold-start problem. The rule-based recommendation algorithm is the third method.

8. Hwang et al. [10] put forward a method to generate the automatic rules with the user's items and made a suggestion on the best rule. The fourth method is the utility-based recommendation. For instance,

9. Scholz et al. [11] found that exponential utility functions are better geared to predicting optimal recommendation ranks for products, and linear utility functions perform much better in estimating customers' willingness.

10. Koenig in [12] developed a system toward real-time human detection and tracking in diverse environments. However, mostly the researchers focus on the point of human detection and tracking in complex scene, while refined contour extraction of human in dynamic scene is still an open question.

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