LITERATURE SURVEY ON SMART FASHION RECOMMENDER APPLICATION

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SURVEY ON PAPERS RELATED TO SMART FASHION RECOMMENDER APPLICATION

Name

Towards Fashion Recommendation: An AI System for Clothing Data Retrieval and Analysis.

Author

Maria Th. Kotouza

Published Year

May,2020

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Basic Description

The fashion clothing industry is moving towards fast fashion, enforcing the retail markets to design products at a quicker pace, while following the fashion trends and their consumer's needs. Artificial Intelligence (AI) techniques are introduced to a company's entire supply chain, in order to help the development of innovative methods, solve the problem of balancing supply and demand, increase the customer service quality, aid the designers, and improve overall efficiency. Recently, an increasing number of projects in the fashion industry make use of AI techniques, including projects run by Google and Amazon.

Highlights of this project

- E-Commerce plays a major role in fashion recommendation.
- This system can act as a personal assistant.

Disadvantages of the project

One of the biggest issues is the scalability of algorithms having real world datasets under the recommendation system, a huge changing data is generated by user-item interactions in the form of ratings and reviews and scalability is a big concern for these datasets.

Limitations of the project

- Significant investments required.
- Privacy concerns.

References

- Guo, Z.X., Wong, W.K., Leung, S.Y.S., Li, M.: Applications of artificial intelligence in the apparel industry: a review. Text. Res. J. **81**(18), 1871–1892 (2011).
- Liu, Z., Luo, P., Qiu, S., Wang, X., Tang, X.: Deep Fashion: powering robust clothes recognition and retrieval with rich annotations. In: 2016 IEEE Conference on Computer Vision and Pattern Recognition (CVPR), no. 1, pp. 1096–1104 (2016).

Name

Fashion Recommendation Based on Style and Social Events.

Author

Federico Becattini

Published Year

2017, University of Florence, Media Integration and Communication Centre (MICC), Viale Morgagni 65, Florence, Italy.

Basic Description

We first provide an overview on the state of the art for fashion recommendation. On overview of our presented method is presented. Here we introduce an outfit emotion classifier based on colour combinations, capable of mapping a generic outfit onto Kobayashi's colour scale; a garment based social event classifier, used to infer the event category suitable for a given outfit; the integration of such modules with a state of an art garment recommendation system. The three aspects are then detailed respectively.

Highlights of this project

- Style-based Outfit Recommendation.
- A style classifier which can then be combined with a recommendation system.

Disadvantages of the project

Many users feel hesitation to feed their personal data into recommendation systems that suffer from data privacy issues.

Limitations of the project

- The cold start problem.
- The complex onboarding process.

References

- De Divitiis L, Becattini F, Baecchi C, Del Bimbo A: Style based outfit recommendation. In: 2021 International Conference on Content Based Multimedia Indexing (CBMI), pp. 1–4 (2021) (IEEE).
- Song, X., Han, X., Li, Y., Chen, J., Xu, X.-S., Nie, L.: Gp-bpr: Personalized compatibility modeling for clothing matching. In: Proceedings of the 27th ACM International Conference on Multimedia, pp. 320–328 (2019).

Name

Fashion Recommendation Systems.

Author

- Samit Chakraborty
- Md. Saiful Hoque
- Naimur Rahman Jeem
- Manik Chandra Biswas
- Deepayan Bardhan
- Edgar Lobaton

Published Year

July,2021

Basic Description

We have developed a new innovative solution through which you can directly do your online shopping based on your choice without any search. It can be done by using the chat bot. In this project you will be working on two modules they are admin and user.

Highlights of this project

- A learning algorithm is applied in this phase to filter and exploit the users' features based on the feedback collected in the information collection phase.
- Recommends the types of items that a user or consumer may prefer.

Disadvantages of the project

Not yet tested in commercial applications.

Limitations of the project

Lack of data analytics capability.

References

- Barnard, M. Fashion as Communication, 2nd ed.; Routledge: London, UK, 2008.
- Chakraborty S; Hoque, S.M.A.; Kabir, S.M.F. Predicting fashion trend using runway images: Application of logistic regression in trend forecasting. Int. J. Fash. Des. Technol. Educ. 2020, 13, 376–386, doi:10.1080/17543266.2020.1829096.

Name

Recommender systems for fashion outfits.

Author

David Nepožitek

Published Year

2020, Charles University, Prague.

Basic Description

Outfit recommendation is a task that can be defined as follows: find such fashion products that they match a given set of garments, and together they form a matching outfit. That can be useful for online retailers or as a tool that suggests items from personal wardrobes. Consider a user that is looking for shoes at an online shop. If they have already some products in the shopping cart, we can improve their experience by recommending shoes that complement these products.

Highlights of this project

- Neighbourhood-based collaborative filtering.
- Model-based collaborative filtering.

Disadvantages of the project

Encoder-only Architecture.

Limitations of the project

Loss and Similarity Functions.

References

- Jimmy Ba, Jamie Ryan Kiros, and Geoffrey E. Hinton. Layer normalization. ArXiv, abs/1607.06450, 2016.
- Dzmitry Bahdanau, Kyunghyun Cho, and Yoshua Bengio. Neural machine translation by jointly learning to align and translate. CoRR, abs/1409.0473, 2015.
- Gediminas Adomavicius and Alexander Tuzhilin.
- Toward the next generation of recommender systems: A survey of the state-of-the-art and possible extensions. IEEE Trans. on Knowl. and Data Eng., 17(6):734–749, June 2005. ISSN 1041- 4347. doi: 10.1109/TKDE.2005.99. URL https://doi.org/10.1109/TKDE. 2005.99.