

Virtual Trial Room using AI and AR

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Abstract: The phrase refers to a Virtual Trial Room application that uses Augmented Reality (AR) and Artificial Intelligence (AI) to let users virtually try on clothing. The virtual garments are used to map or determine the user's dimensions or alignment. The lighting intensity of the clothing render is adjusted to fit ambient lighting conditions, and the clothing moves and folds realistically. By employing 2D clothing models in addition to 2D photos, the offered application outperforms comparable augmented reality applications.

Keywords: Augmented Reality, 2D image, Alignments of clothing, Machine Learning.

REFERENCES

- [1] H. Kim, M.L. Damhorst, "The relationship of body-related self-discrepancy to body dissatisfaction, apparel involvement, concerns with fit and size of garments, and purchase intentions in online apparel Shopping", *Clothing and Textiles Research Journal*, 2010, vol.28, 4, pp. 239-254.
- [2] M. Aghekyan, P. Ulrich, L. Connell, "Using body scans in assessing perceptions of body attractiveness and size: cross-cultural study", *International Journal of Fashion Design, Technology and Education*, 2012, vol.5, 2, no.7, pp. 81-89.
- [3] B. Xu, W. Yu, T. Chen, Y. Huang, "Three-dimensional technology for apparel mass customization: Part II: Human body modeling from unorganized range data", *Journal of the Textile Institute*, 2003, vol. 94, 1-2, no.1, pp. 81-91.
- [4] M.L. Mpampa, P.N. Azariadis, N.S. Sapidis, "A new methodology for the development of sizing systems for the mass customization of garments", *International Journal of Clothing Science and Technology*, 2010, vol.22, 1, pp. 49-68. 2019 International Science and Technology Conference "EastConf" 978-1-7281-1931-1/19/\$31.00 ©2019 IEEE.
- [5] Y.S. Ding, Y.C. Xu, "Intelligent optimal selection of garment sizes by using immune algorithm and AHP method", *Journal of the Textile Institute*, 2008, vol.99, 3, pp. 281-286.
- [6] New era of mirrors is here, URL: <https://tclabsl1c1.godaddysites.com/imagetwin-mirror.html>(Accessed 12.02.2018).
- [7] Buying clothes and virtual try-on, URL: <https://trymetail.com/> (accessed 12.02.2018).
- [8] Passport of dimensional characteristics, URL: <https://mport.com> (accessed 12.02.2018).
- [9] V.V. Getmantseva, E.G. Andreeva, "Generalized model of the process of parametrical designing of clothes", *Proceedings of the Int. scientifictechn. Symposium, Modern problems of engineering sciences, Moscow: Kosygin State University of Russia*, 2017, pp. 86-90.
- [10]K. Shah, M. Pandey, S. Patki and R. Shankarmani, "A Virtual Trial Room using Pose Estimation and Holography," 2020 4th International Conference on Intelligent Computing and Control Systems (ICICCS), Madurai, India, 2020, pp. 685-691, Doi: 10.1109/ICICCS48265.2020.9120947.
- [11]S. Sanzam, S. G. Das, Sifat-Ul-Alam, M. I. Jubair and M. F. Ahmed, "Image-to-Image Attire Transfer for Virtual Trial Room," 2020 23rd International Conference on Computer and Information Technology (ICCIT), DHAKA, Bangladesh, 2020, pp. 1-6, Doi: 10.1109/ICCIT51783.2020.9392671.
- [12]Kamani, Shreya, Neel Vasa, Kriti Srivastava and Dwarkadas J. Sanghvi. "VIRTUAL TRIAL ROOM USING AUGMENTED REALITY." (2014).