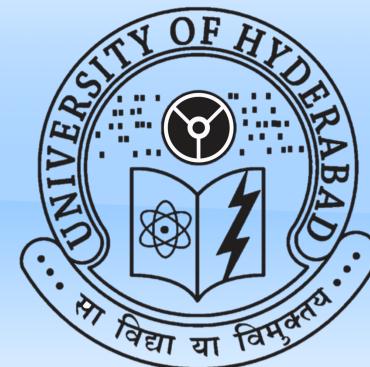




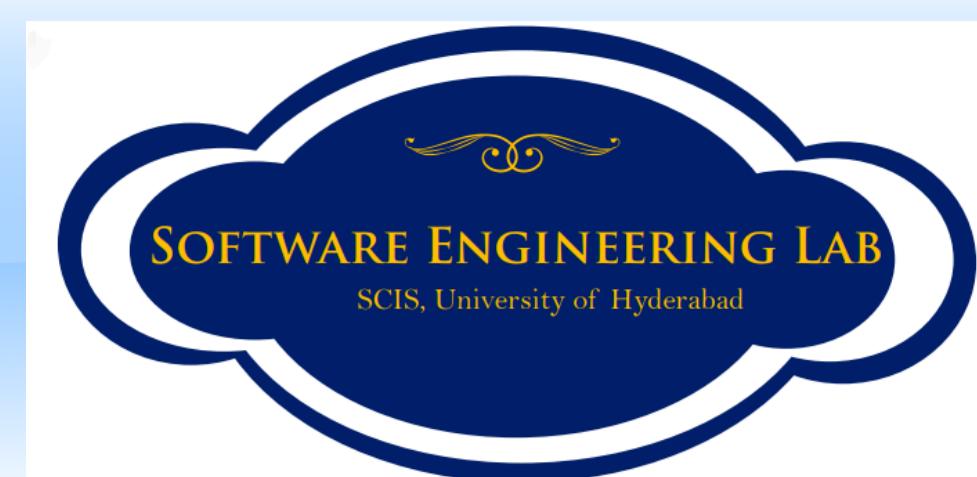
संस्कृत अवलोकन
Department of Science & Technology
Govt. of India

Technology Enabling Centre



Archetype Expo 2024

Software Engineering Lab,
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Virtual-Tryon-Dressing Room

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Abstract:

This project proposes a solution to the challenge of online apparel shopping by introducing a virtual fitting room within e-commerce websites. Utilizing body part detection technology, the system employs the Haar cascade dataset to identify relevant body parts accurately. Features like line, rectangular, and edge features are extracted using integral images and evaluated with an AdaBoost classifier for object detection. The virtual fitting room allows users to try on various apparel items such as goggles, t-shirts, earrings, tiaras, and frocks virtually, reducing the likelihood of returns and cancellations. Additionally, the system integrates recommendations from sources like Google and YouTube and offers a custom search engine for educational resources. Through innovative technology and user-centric design, this project aims to enhance the online apparel shopping experience, making it more engaging and convenient for consumers.

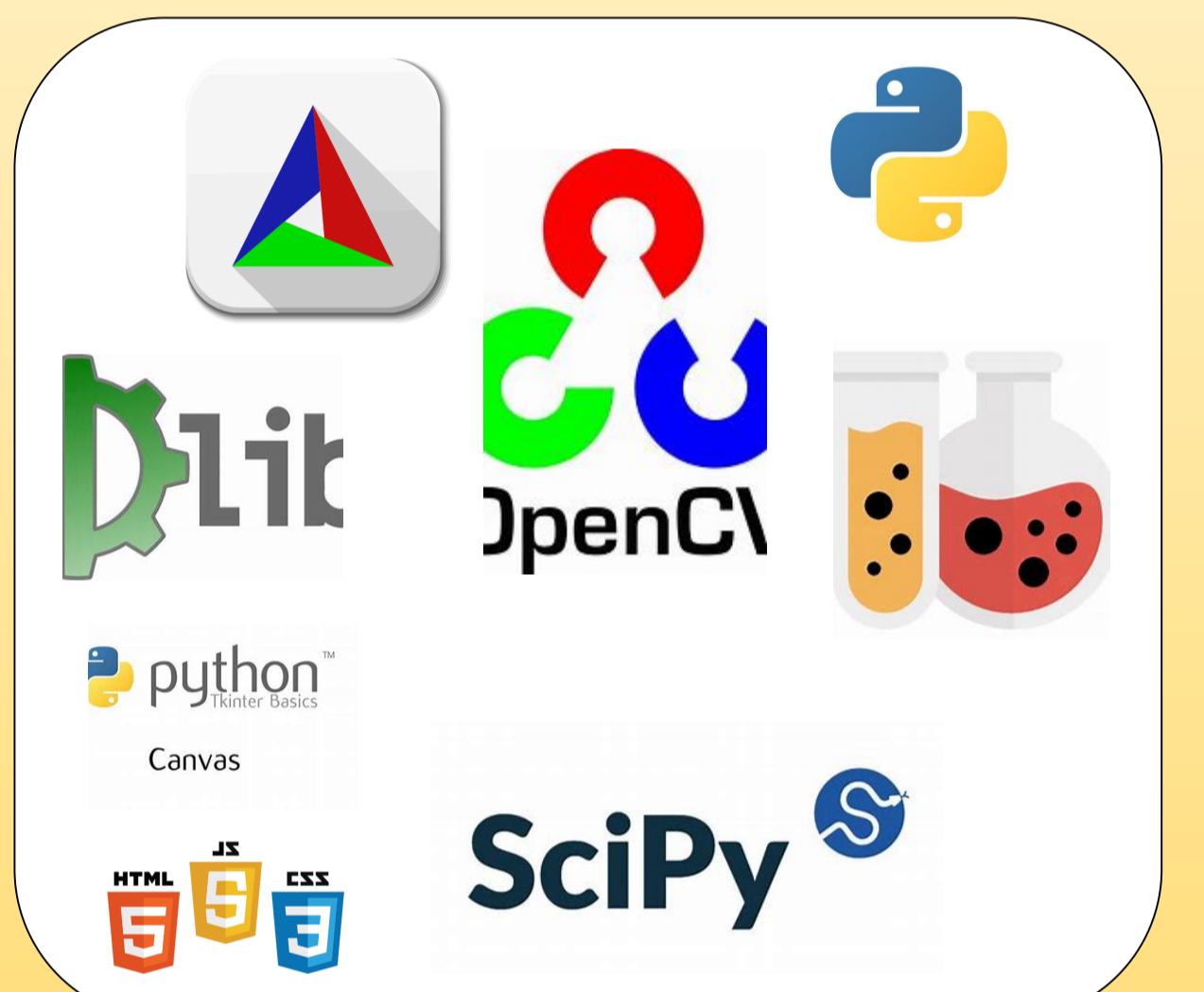
Problem Statement

To Provide a virtual room to try apparel through e-commerce website before buying it.

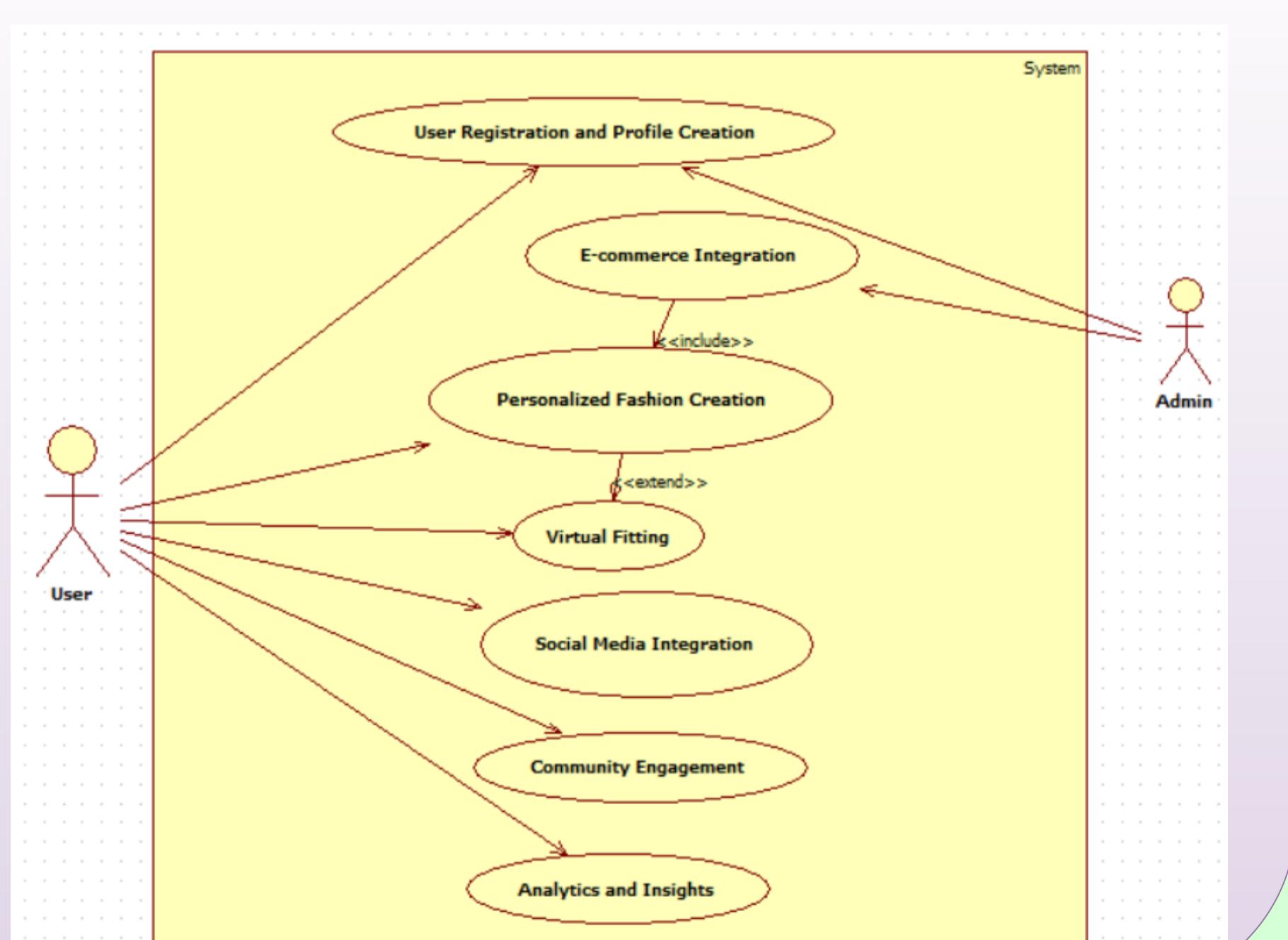
System Design:

Tools used for webpage

Cmake (3.12.0)
Dlib (19.15.0)
Opencv (3.4.2.17)
Scipy (1.0.0)
Cascade trainer gui (1.8.0)
Tkinter canvas (8.6.8)
Numpy (1.18.1)
Anaconda (4.8.2)
Python (3.7.4)
Flask Web framework (1.1.1)



Use Case Diagram



Conclusion:

Implementing the virtual fitting room solution will greatly enhance online apparel shopping. With advanced body part detection and a wide range of virtual try-on options, users will experience a more engaging and convenient shopping experience. Integrating recommendations and a custom search engine further enriches the platform.

Future Enhancements:

After detecting body parts of target image there are certain operation we need to perform for make this accurate.

So for this we need to train three type of network through which we can set clothes on target image.

- PAN (pose alignment network)
- TRN (texture refinement network)
- FTN (fitting network)
- Community Engagement
- Analytics and Insights

References

M2E-Try On Net: Fashion from Model to Everyone (<https://arxiv.org/pdf/1811.08599v1.pdf>)
VITON: An Image-based Virtual Try-on Network (<https://arxiv.org/pdf/1711.08447.pdf>)