SHOPPING EXPERIENCE

Magic Mirror app
Online Shoppers

A mobile-based AR magic mirror enabling virtual try-ons of garments during online shopping that aims to recreate at home the experience of buying clothes from a physical store.

An AR-based tele-fitting room, based on the magic mirror idea (i.e. large mirrors installed in stores that augment the garments on top of the users' image), but utilizing mainstream devices (e.g. smartphones) so that it is easy to use from one's home. The proposed application simulates the physical experience of trying on clothes in-store, providing the necessary product details (visualization of garment fit on the consumers themselves) as well as user assistance features (personal assistant for finding the perfect outfit).

CONSORTIUM

iti
Information Technologies Institute

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Metail

We are Unfolded

odlo

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eTryOn

Virtual try-ons of garments enabling novel human fashion interactions

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OBJECTIVE

The primary objective of eTryOn is to revolutionize the interaction between users (i.e. fashion designers, lovers and consumers) and fashion items, by researching and developing technologies that allow virtual try-ons of garments. In this direction, the main research, innovation and technological endeavors of eTryOn are to develop technology for:

- Generating personal photorealistic 3D avatars of the user by self-scanning themselves.
- Automatically simulating the interaction between the 3D user avatars and digital garments (i.e. size fitting and visualization of interactions during body movements).
- Extracting fashion insights from user preference data and generating fashion recommendations.
- Novel interactive (AR/VR) applications providing new immersive and realistic ways for people to interact with fashion

By combining the high-quality experience offered by photorealistic personal avatars, their natural interaction with virtual garments, and the accurate fashion insights - recommendations with the use of XR technologies like Virtual - Augmented Reality, eTryOn provides future interactive solutions for Human Fashion Interaction, enhancing the way users experience fashion items in a novel immersive form.

eTryOn will provide **three novel Human - Fashion - Interaction (HFI) applications** using XR technologies (AR, VR) in order to i) enhance the creative process of fashion design, ii) revolutionize the way people interact with fashion in the social media, and iii) simulate the physical in-store experience for online shopping.

CREATIVE EXPERIENCE

Designer app
Fashion Designers

A VR application enhancing the creative process of garment design by offering realistic fitting of the digital garments on photorealistic 3D avatars.

An immersive VR application that offers the necessary realism in terms of both the utilized avatars that are textured, real-person-looking and animated with realistic movements (catwalk, jumping, running, etc.).This realism renders the proposed application a "digital twin" of an actual fitting process that is currently done with real mannequins and wearing produced prototypes of the garments during the garment design process. Furthermore, it can enhance the entire design cycle of a garment, by offering realistic visualizations of garments, fashion trend insights and decision - making support for all the involved stakeholders (production managers, sales managers, manufacturers, etc.). With the eTryOn Designer app, the garment production rounds and time can be minimized, reducing the required materials, human resources (actual mannequins), and eventually cost for designing a garment.

SOCIAL EXPERIENCE

DressMeUp app
Social Media Users, Fashion Lovers

A mobile application for social media users, allowing them to virtually change their outfit in an image / video by selecting from a pool of digital garments and then upload it to social media.

An application based on mainstream devices (i.e. smartphones) that allows social media users to try on garments digitally, without having the need of accessing the physical item. As a result, the lately introduced market of digital clothing can become a mainstream choice through the use of the proposed application. In this way, the users can have the same result for their Instagram account without having to buy expensive items reducing significantly the environmental footprint of the fashion industry. Moreover, this opens the opportunity to try and market garments that were unreachable before, e.g. garments worn by actors in movies.