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3D VIRTUAL FITTING TECHNOLOGY AND SIMULATION ON DYNAMIC EFFECT ON ETHNIC COLLECTIONS USING CLO3D

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Abstract -This project aims to design and simulate a collection of digital garments under the concept of women's wear Ethnic Collection. 3D virtual fitting technology of down jacket stated that "Today's society is one of rapid development. A world of fierce rivalry and ever-emerging new technologies"as well as one in which the Internet has begun to have a substantial impact on all aspects of social life. In recent years, virtual reality shows have received some attention. The advantages of virtual fitting include a convenient and quick intuitive fitting mode that provides customers with a new shopping experience. Clo3d provides you with a familiar, easy-to-use interface that allows you to visualise your strategy in a quick and easy manner. Clo3D, the most advanced, intuitive, and powerful programming of its type, is triggered by ready-made design blocks and allows you to doodle directly on your avatar to automatically construct design elements.
To increase the demand of Ethnic collection in virtual reality to turn the outfits into something contemporary and fun.Clo3d,our true-to-life 3D garments make it easy to fine tune the fit of your designs even for drape-sensitive fabrics,like light weight wovens.This project is a design digital fashion for NFT Metaverse,where the customers can see their garment style,pattern,fabrics,color,selection and even garment fits on Virtual Reality.

Keywords: Virtual Reality, 3D modeling, Metaverse, Ethnic Collection.

1.INTRODUCTION

This project deals with the design digital fashion software clo3d for NFT METAVERSE. For occasional garments, the customer can see their garment on virtual reality. To increase the demand of Ethnic collections in VIRTUAL REALITY and to convert the outfits into something contemporary and fun.
In the subject of planning, new technological advancements have resulted in emotional shifts. CLO 3D is a 3D modelling software used in the fashion and apparel industries to create garments. CLO is a strong 3D application that allows you to create garments with bewildering details while making quick modifications to designs, surfaces, and subtleties. This cuts down on plan planning time, allowing you to jump right into the plan interaction. Pattern files are saved and exported as .dxf file and CLO 3D file can be found as .zprj, .zpac. Rendering can be done either in CLO 3D , Marvelous Designer and other 3D programs like Blender (an open source software), Cinema 4D, Maya or 3DS Max (These are proprietary software). These 3D models from CLO 3D can be bridged to other software as .FBX, .OBJ or a collada file and can be rendered. The more advanced the software , the higher the render output.

1.1 Influence of CLO3D in Design Industry:

CLO provides you with a natural, easy-to-use interface that allows you to visualise your strategy in a quick and painless manner. Because of the variety of human body and shape, it was difficult to find garments with a "customised" effect in existing ready-to-wear detail, but now, in the virtual fitting framework used on the lookout, all garments models and life sized models are communicated in activity structure for the introduction of pieces of clothing when clients tri on fabric, they can pick the model that is closest to the client's body shape. You can likewise enter more nitty gritty information, for example, skin tone, haircut, and face state of the client which is identical to a genuine client taking a stab at the garments. So this product to fit the ideal size will greatly influence consumer loyalty.Clothing has a 3D form and many parts are connected based on the human body forms.The advancement of Technology , materials and 3D printing provide a completely new definition. 3D modeling is becoming an innovative process, as they use scanning technology to design new Fashion Accessories or Clothing that perfectly fit for humans.

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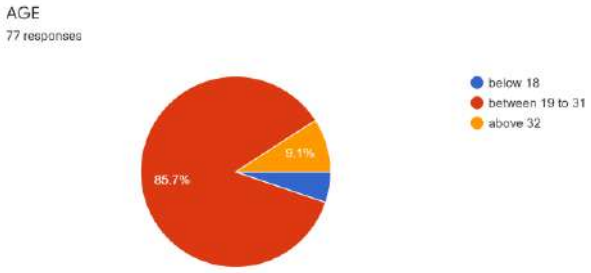
1.2 Analysis and Interpretation:

Age Group: Out of 77 respondents,85.7% of the respondents are under the age group of 18-31 years, whereas 9.7% of the people were above the age group of 32 years. This shows that the age group of 18 -31 are the majority of the respondents compared to other age groups.

Target Customers: Out of 77 respondents, 55.8% of the respondents were fashion students, 19.5% of the respondents were working , 24.5% of the respondents had a boutique.



Preferences on learning about the software

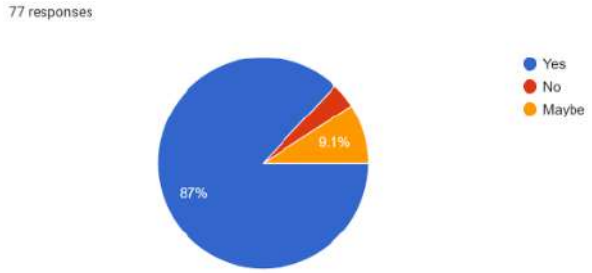


Chart 2: Preferences on learning about the software

From the above pie chart, 87% of the respondents want to learn the software, whereas 9.1% of the the respondents have knowledge about the software.

2.ETHNIC COLLECTION:

To increase the demand of Ethnic collections in VIRTUAL REALITY and to convert the outfits into something contemporary and fun.Any styles, designs, or fabrics colors can be changed by customers before the purchasing of fabrics.

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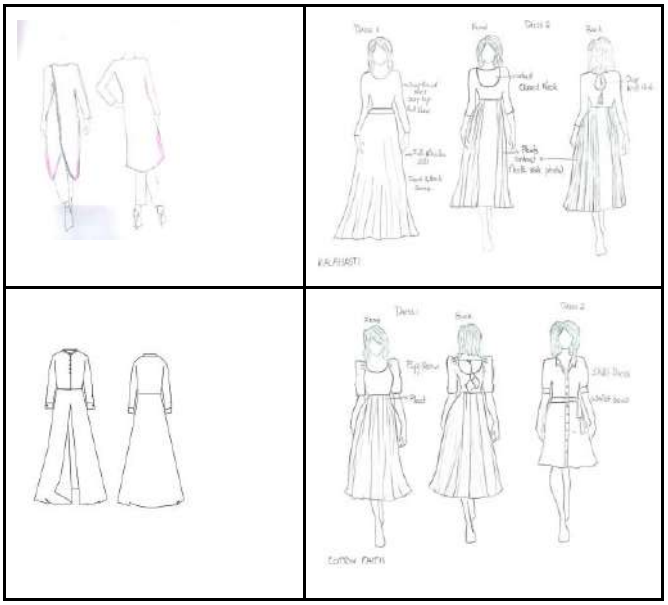

Figure 2.1 flat and rough sketches

This software simulates a customer's optimal fit in order to ensure that their items fit correctly. We accomplished computerised design on 2d and texture reenactment on a 3d virtual fitting framework using the Clo3d programme. The client's choice of inclination on their 3d item of clothing planning has resulted in amazing size fit, texture, and variety determination.

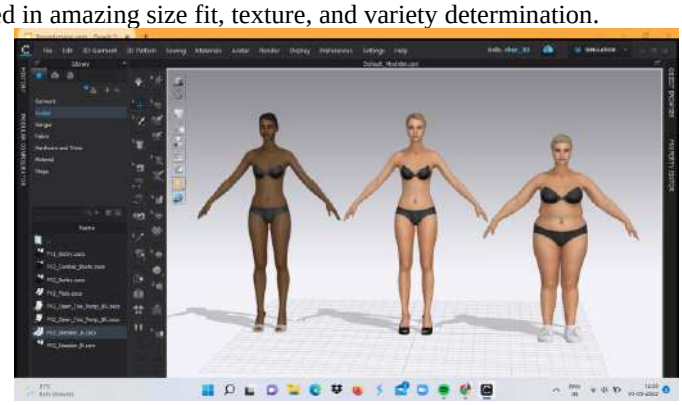

Figure 2.2 Avatar variations sample

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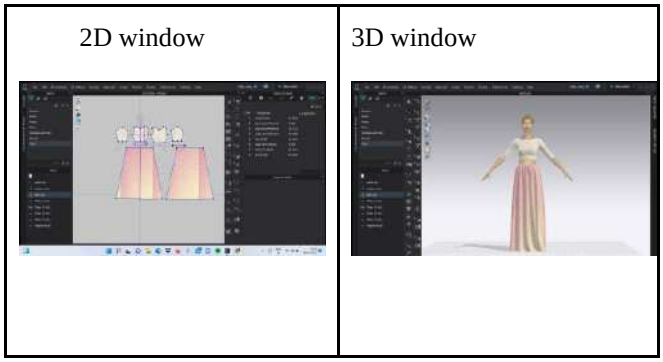

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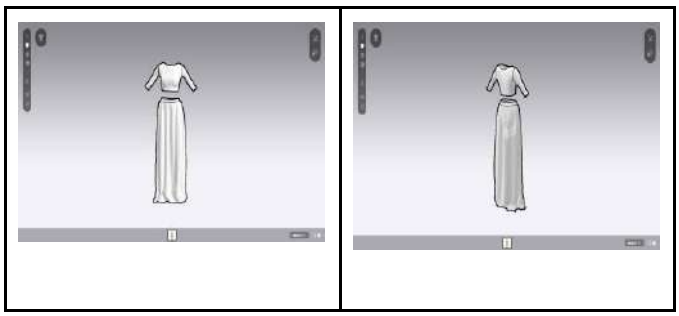

Figure 2.3 digital sketch sample on CLOSET

Figure 2.4 Size Fittings in CLO

CLO is the most advanced, intuitive, and coherent tool of its kind, and it can be used effectively. Individual designs are generated by a zero-waste method that drapes directly on the avatar. Complex patterns can be created and altered on the avatar, and material characteristics can be evaluated as it is moving. Patterns can be draped naturally on the avatar, and artificial print designs can be placed on the panels.

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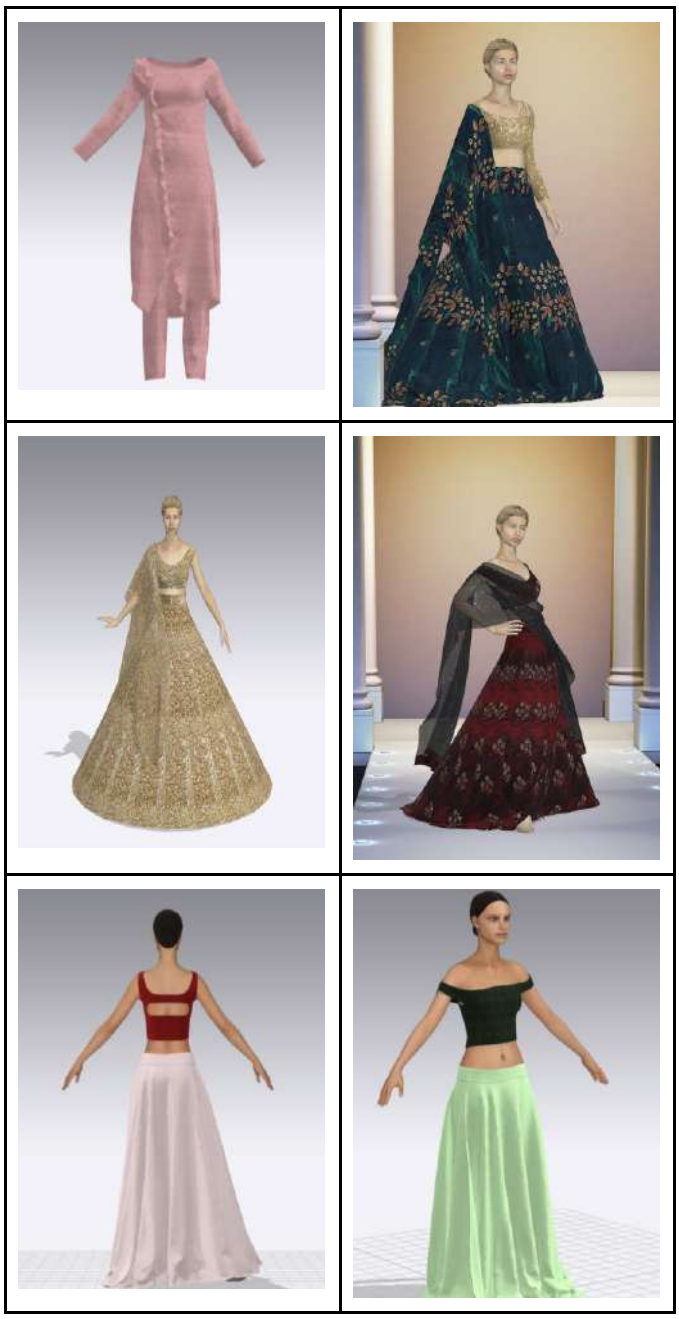

Figure 2.5 VIRTUAL GARMENTS

3. CONCLUSION

Creating a digital collection of clothing that are totally produced and simulated in advance 3D software will alleviate many of the issues that arise during production. Clo has become one of the primary problems for creators who are utilising new technologies, as well as one in which the internet has begun to have a significant impact on many aspects of public life. The advantage of virtual fitting is a helpful and fast intelligent fitting mode, which provides clients with a different shopping experience. Customers' dresses have been fitted and good results have been reached in terms of fitting..Learning 3D is exceptionally valuable since 3D is becoming adequate all

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over the place and individuals and fashioners are moving their brains towards 3D. On a study from Fashion Designers, they are going to get their hands on experience by learning and executing 3D on their plan interaction as they see these projects are efficient and settle on fast choice on their plan to their clients.Hereby,we have done from the basic rough sketches,flat sketches,digital sketch and 2D pattern for our VIRTUAL GARMENTS

4.REFERENCES

Paper Publication on the concept on Virtual Designing
https://www.fibre2fashion.com/news/latest-fashion-trends-news/contemporary-ethnic-wear-gains-popularity-in-india-119914-newsdetails.htm
https://www.scribd.com/document/338549704/A-Study-on-Indian-Ethnic-Wear-Brands
https://www.academia.edu/35993386/THE_STUDY_OF_THE_INDIAN_FASHION_SYSTEM_WITH_A_SPECIAL_EMPHASIS_ON_WOMENS_OCCASION_WEAR_International_Journal_of_Textile_and_Fashion_Technology_IJTFT
https://www.researchgate.net/publication/358724242_CLO3D-Based_3D_Virtual_Fitting_Technology_of_Down_Jacket_and_Simulation_Research_on_Dynamic_Effect_of_Cloth
https://www.businessoffashion.com/articles/technology/at-clo-virtual-fashion-digitising-the-design-process-to-drive-transformation/
https://drexel.edu/westphal/academics/graduate/FASH/research/clo-3d/
https://www.newschool.edu/parsons/story/rendering-a-new-concept-for-design/