

# Elevate Interior

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**Abstract**— Our application is easier way to design interior of home or office with furniture and accessories and also interest into your mobile or laptop or computer designs like interior design, car design, architecture, CPU design, etc. In AR home design systems, augmented digital image of the real environment are contemplated with virtual furniture. Typically, the user can insert, move and remove virtual furniture interactively in 3D over an image taken with a digital camera. In our AR concept, we studied the enhanced possibilities to manipulate the augmented image of environment, for example by removing existing furniture to see better how the new furniture fits in. From the camera of your phone or tablet you just need to point your phone to your room and you can also add any home accessories like chair, table, sofa, etc. To check is it look good in your particular room or not with different options. It includes accelerated code for significant part of the library, still keeps growing and is being adapted for the new computing technologies and GPU architectures. We are also using Vuforia SDK for implementing our application in android or IOS both platform with help of Unity. We provide design your house with your choices and check before buy that it is suitable or not.

**Key words:** Augmented Reality, Interior Design, Elevate Design, Choose Color, Home Planner, Design Home, Exterior & Interior Design

## I. INTRODUCTION

Our application provides you to design your home with its furniture and accessories and also interest into your mobile or laptop or computer designs like interior design, car design, architectures, CPU.

From the camera of your mobile or tablet you just need to point your phone to your room and you can also add any home accessories like chair, table, sofa, etc. To check is it look good in your particular room or not with many different options. Using this application, you can easily design your ideas. You can design without originally take things to your home, it all will be in provided in this application.

Our main Aim is to build the application which makes easy and efficient way for designing the house or office or rooms. This application also calculates the measurement for making perfect interior. We provide design your house with your choices and check before buy that it is suitable or not. We are uses Augmented Reality for it.

## II. LITERATURE REVIEW

- 1) In the home design concept, VR and 3D graphics system typically have functionalities where the user is able to define a 3D space (dimension of the floor plan, location of window, doors, etc.) and insert, move and remove virtual furniture.
- 2) In AR home design systems, augmented digital image of the real environment are contemplated with virtual furniture. Typically, the user can insert, move and

remove virtual furniture interactively in 3D over an image taken with a digital camera. In our AR concept, we studied the enhanced possibilities to manipulate the augmented image of environment, for example by removing existing furniture to see better how the new furniture fits in.

- 3) In the research project, we considered Web-based interior design concepts with the help of concept scratches and scenarios of fictitious future service. The fictitious, sketched service enables ordinary people to plan easily the furnishing and decoration of their properties using novel technologies, such as augmented reality.
- 4) The developed do-it-yourself technology concept allows users to model their existing home and furniture as well as to create virtual decoration for properties for sale in an online marketplace for home and real estate offering the service. In additional to consumers planning new decorations, the service with its developed AR technologies could be exploited by pro-user, such as interior design professionals and real estate agents.
- 5) Augmented reality is a profound visualization method for situation where there is a need to show something in a real environment and to enhance user's perception. It is defined as real time interactive system that combines real and virtual elements in 3D.

## III. STUDY FINDINGS

- 1) Recent high-profile into the world of AR technology by industry giants such as Adobe, point to a shift towards augmented and virtual reality or extended reality and have once again began to capture the people's imagination.
- 2) Presently, augmented reality as a new media is imposed more and more requirements. It is designed to move and feel the realm of virtual reality forward. Also, market revenue is predicted to rocket. In addition, mobile AR segment will significantly high.
- 3) The application must be use on mobile and display resolution will be HD Quality or 1920x1080. The application is using Google's Scenefrom API and also Vuforia SDK for android and ios both platforms.
- 4) Application helps user to build their home with good interior. Application containing a shopping option of interior. Application must be installed in good camera quality mobile phone.

## IV. FUTURE ENHANCEMENT

We are planning to take AR to a next level for better virtual realms for our future generation. We are planning to take this application to next level with taking building designing with accommodation of multiple rooms, multiple floors, and also with basic amenities with help of AR technology.

## V. CONCLUSION

Elevate interior is the application that take designing experience to next level. With the Augmented Reality Technology, we give better user experience and perfection in design. In particular, AR technology opens up many new research fields in engineering and architecture. In an AR environment, design work can become more lively, convenient, and intelligent. Plus, design work and manufacturing can be conducted at the same time and we close relationship with each other. Using this application you can easily design your ideas. You can design without originally take things to your home, it all will be in provided in this application.

With AR, the virtual products of graphics technology are not only for simulation but also obtain real higher values. Entire scenes, like design and other things can be accessed with your mobile AR device that is so realistic and interactive that they'll be nearly indistinguishable from reality.

From the camera of your mobile or tablet you just need to point your phone to your room and you can also add any home accessories like chair, table, sofa, etc. To check is it look good in your particular room or not with many different options.

In AR home design systems, augmented digital image of the real environment are contemplated with furniture. Typically, the user can insert, move and remove virtual furniture interactively in 3D over an image taken with a digital camera. In our AR concept, we studied the possibilities to manipulate the augmented image of environment, for example by removing existing furniture to see better how the new furniture fits in.

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## REFERENCES

- [1] Hardy-Rolls, Piers (2009). Subscription MMOGs: Life Beyond World of Warcraft (PDF). Lyndon, UK: Screen Digest. Retrieved 30 March 2009.
- [2] Riccitiello, John (October 23, 2014). "John Riccitiello sets out to identify the engine of growth for Unity Technologies". VentureBeat (Interview). Interviewed by Dean Takahashi. Retrieved January 18, 2015.
- [3] Augmented Reality for Mobile and web: [https://www.8thwall.com/?gclid=CjwKCAjwsdfZBRAkEiwAh2z65vH7AIE4k5ge6E\\_4m3CcpVtBrRMPpOyyBO4IHTXZ8HMDUNzpaB0wRoCzk0QAvD\\_BwE](https://www.8thwall.com/?gclid=CjwKCAjwsdfZBRAkEiwAh2z65vH7AIE4k5ge6E_4m3CcpVtBrRMPpOyyBO4IHTXZ8HMDUNzpaB0wRoCzk0QAvD_BwE)
- [4] Scripting in JAVA in Android: [https://www.tutorialspoint.com/android/android\\_studio.html](https://www.tutorialspoint.com/android/android_studio.html)
- [5] Getting Started with Vuforia Engine in Unity: <https://library.vuforia.com/articles/Training/getting-started-with-vuforia-in-unity.html>
- [6] Tommaso Lintrami, Unity 2017 Game Development Essentials - Third Edition. Originally published: 29 January 2018
- [7] ARCore by google: <https://www.youtube.com/watch?v=uxLqdpH37H4>
- [8] Unity3D and Vuforia SDK tutorial videos from udemy: <https://www.udemy.com/ar-homestores/>
- [9] Google api Sceneform with ARCore support tuotial from udemy: <https://www.udemy.com/arcore-and-sceneform-for-android-ar/learn/v4/>
- [10] Wikipedia of augmented reality : [https://en.wikipedia.org/wiki/Augmented\\_reality](https://en.wikipedia.org/wiki/Augmented_reality)