

Department of Electrical and Computer Engineering
North South University



Senior Design Project

Augmented Reality Home Decorator

MD. AL - AMIN ID# 152 0664 042

SHARIEAZ KAVIER ID# 151 3192 642

**Faculty Advisor:
Dr. Atiqur Rahman
Associate Professor
ECE Department**

DECLARATION

This is to declare that this report is a software-based implementation and is self-contained for the purpose of submission as a part of the Senior Design course in fall 2019 at North South University and has not been used elsewhere for any other reason. The materials that are obtained from other source are duly acknowledged in this project. Any similarities, in wording, if found to other papers, which has not been cited, is a subject of pure coincidence.

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MD. AL - AMIN

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SHARIEAZ KAVIER

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Approval

The Project entitled "**Augmented Reality Home Decorator**" by

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has fulfilled all the criteria required for the completion of Bachelors in Science
Computer Science and Engineering program at NSU on December 2019.

Supervisor's Signature

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Department Chair's Signature

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Acknowledgement

We would like to begin with our gratitude towards North South University's Department of Electrical and Computer Engineering for providing us with the platform to showcase our design capabilities, troubleshooting ability and implementation of theoretical knowledge fed to us through the core courses designed in the program and ultimately leading to the completion of senior design project.

Our most sincere gratefulness is to our project supervisor Dr. Atiqur Rahman, Associate Professor for his relentless support and motivation throughout the project term for which we shall remain indebted forever. The completion of this project would have been implausible with his support and supervision and we would like to thank our family members, friends, fellow classmates and all other personal, to whom we might have caused any inconvenience to, during the project term, for their understanding and support.

Augmented Reality Home Decorator

Abstract

This project presents an application of Augmented Reality (AR) for interior design. Due to huge advancements in computer vision algorithms and cheap hardware, Augmented Reality is becoming mainstream. Allover the world most of the sales come from physical stores. Buying furniture from brick and mortar shops is cumbersome and time consuming. AR is changing the furniture industry. In an AR environment virtual furniture could be placed and manipulated in the physical world in real time which allows the user to have an interactive experience. Users would be able to visualize exactly how a table would look like in their kitchen, dining, bedroom anywhere they wants. When people can place an actual couch on the living room or visualize how a bookshelf would look in Different color. The risk of product return and logistics is drastically reduced. As online stores replace brick and mortar shops. AR will play a vital role in the furniture sales. This project provides new ways an individual/enterprise could utilize AR to design interiors.