

#### Abstract:

I'm making an AR app which is a catalog of a different kind of furniture that you can select and then place in your home after detecting the plane to see if this suit your environment, this application was developed with unity and AR foundation, also there is illumination transfer and shadow to see the furniture more realistically.

#### Problem statement:

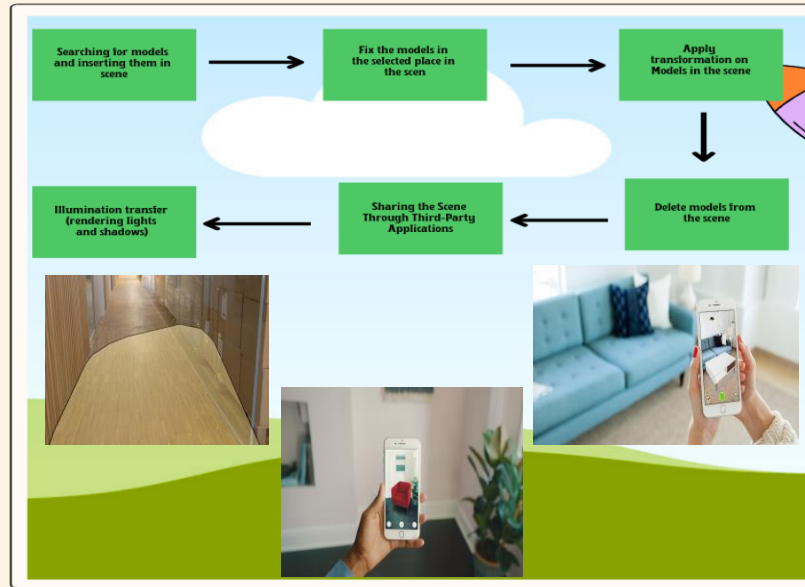
In my research, I will be developing an AR Furniture app for shoppers to be able to virtually furnish their rooms with some models, see their furnished place more realistically by Illumination transfer (rendering lights and shadows), allow snapping the space then selecting the item to be able to see the texture and fabric and share with others through third-party applications

#### Motivation:

nowadays, People face a lot of problems when buying furniture objects online. For example, when people receive the furniture they chose, they find the sizes are not appropriate for their place, and they find the colors are not suitable with the rest of the furniture or with the paint of the walls in their place. This leads to the absence of imagination of the general look of a chosen furniture for a certain place is a problem facing many people, so doing this app saves people from undesirable unfit results, insufficient choices of suitable colors and helps people to share their choices with others to get their opinions.

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#### Methodology:

- 1-Searching for models and inserting them in unity
- 2- Fix the models in the selected place in the scene
- 3-Apply transformation on Models in scene
- 4- Delete models from the scene
- 5- Add more models in scene
- 6- Sharing the Scene Through Third-Party Applications
- 7- Illumination transfer
- 8- Implementing a Mobile application

#### Results:

