



BAHÇEŞEHİR UNIVERSITY
Faculty of Engineering and Natural Sciences

SEN3304 – Human Computer Interaction

Project Proposal – Team#4

Project Title: Furniture and room designing tool with AR and AI

Problem definition:

Changing the design or the colors of the furniture has always been an issue for many people, and they are worried about putting their money on some new designs because they aren't sure about the result, and some others don't have money issues, but they think long and hard before making any decorating decisions. On the other hand, they would really prefer to see their room Furnished without actually buying or changing the room, and without spending hours in imagining the outcome.

How to overcome the problem:

The program will scan user's room with colors and models to easily change the visual of room on application using AR and AI (Augmented Reality and Artificial intelligence).

Some properties:

- AR Scanning for 3D perspective matching.
- AI for declaring the colors of objects and suggest colors to claim best harmony depending on a color palette.
- Model database for ex. google poly to use in the room preview.
- It will also work outside, for example in garden design.
- Not only addition from the imported models; also with AI, program is already generating decoration models (potential new furniture), users can transform these objects also as their wishes.
- The app can also add new details to the home such as new windows, doors, walls, etc.