Senior Design Project Summary

Project Name:	inlight
Project Web Page:	projectinlight.github.io
Team Members:	Yiğit Özen, Latif Uysal, Ahmet Yavuz Karacabey, Süleyman Kılınç
Supervisor:	Uğur Güdükbay
Jury Members:	Selim Aksoy, Özgür Ulusoy

Project Description:

Our aim is to develop an efficient way for detecting light sources and other environmental variables using a camera in real-time and use this information for real-time photorealistic rendering in the same environment for Augmented Reality (AR) applications. Classical AR applications on mobile platforms use the camera of the mobile device for capturing images of the real world, and display the augmented view on the screen of the device. Our idea is that the device itself can be placed into the real world to simulate a surface; and the materials with true sizes and colors can be augmented using the environmental variables captured by the camera of the device and displayed on the screen. The same technology can be used to render 3D objects on the screens of mobile devices based on the changing lighting in the environment; or performing more photorealistic renderings in classical AR application that use eyeglasses or head-mounted displays to place virtual objects on the real world by putting an extra camera to the location of the placement.