A Mobile Information Kiosk with navigation of Buildings for Visitors using AR

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He was awarded the outstanding student awards cum dean's List of 2016 autumn term. He is interested in computing algorithm and programming. He wants to become a good algorithm designer in future.

In 21st century, there have been more and more large size buildings being built in cities. Despite Benefits from services provided by those buildings, people also find themselves being confused by the complex indoor environments. This project tries to solve this problem by building a system with AR and AI techniques that could provide information enquiry and indoor navigation services to visitors for exploring an unfamiliar building. The state of the art AR techniques like ARCore or ARKit provides a set of development tools for developers to build an AR mobile app efficiently. However, all of them currently can only recognize artificial markers like QR code or special pattern image like poster. These QR codes or posters require a cumbersome pre-installation and are difficult for scalability. To remedy this weakness, the proposed system combines AI techniques for recognizing static objects like doors. After object recognition process, navigation or other related information can be displayed on AR interface accordingly. It also takes advantage of AR techniques and data from built in sensors to keep track of motions as well as orientation of users.