

switchAR

(AR Virtual Switch Control for IoT-based Smart Home Automation)

SD29
PROJECT ID

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ABSTRACT

"A one-of-a-kind smart home system that makes use of AR"
switchAR is a mobile-based application that integrates **both IoT and AR** to make controlling smart home devices **easy and fun**. It aims to **help homeowners, elderly individuals, and disabled individuals** who might find it hard to move around or use regular switches. With SwitchAR, they can **control lights, temperature, and other home appliances** directly from their smartphones, making daily tasks simpler and more accessible.

BACKGROUND PROBLEM

"There are a few AR integrated IoT mobile apps in the market"
The home automation sector has grown due to IoT. However, controlling smart homes can still be difficult for homeowners, elderly and disabled. Multiple apps for each device can be frustrating. IoT devices' inability to connect with each other limits the benefits of home automation for older or disabled people. This makes it challenging for them to lead convenient and independent lifestyles.

Home Automation Mobile App

To develop an AR-integrated IoT mobile application can allow users to easily control switches.

Automation

Implement an automation feature where users can set conditions to control devices automatically.

Customized Switches

Simplify setup and customization for users by automatically adding and configuring switches.

Voice Command

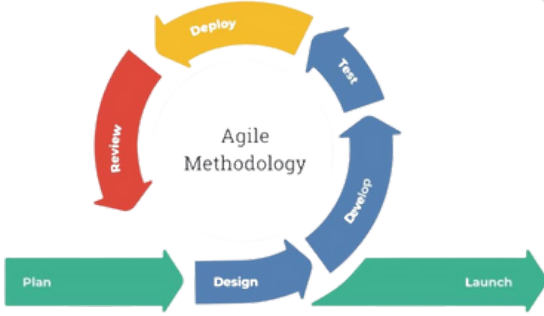
Integrate with Google Home Assistant for voice command capabilities.

Evaluation of other Augmented Reality (AR) mobile apps that utilize the Internet of Things (IoT)

Application	Internet of Things (IoT)	Markerless Augmented Reality	Marker-based Augmented Reality	Compatibility	Customization	AR Virtual Buttons
Philips Hue	✓	✓	-	-	✓	-
Ikea Place	✓	✓	-	-	-	-
Smart Home AR	✓	✓	-	-	-	-
Samsung SmartThings	✓	✓	-	-	✓	-
switchAR	✓	-	✓	✓	✓	✓

"Augmented reality will allow for the integration of switchAR with more customization features."

METHODOLOGY



TOOLS



TARGET AUDIENCE



Elderly



Disabled



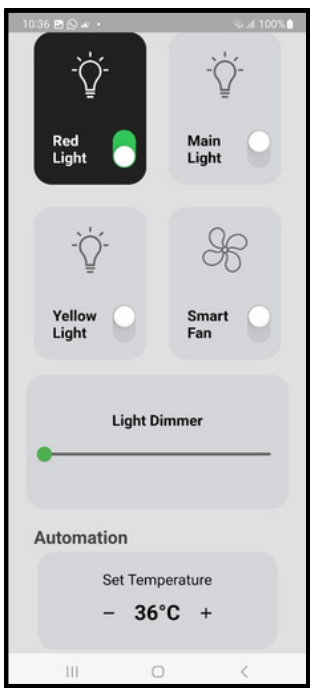
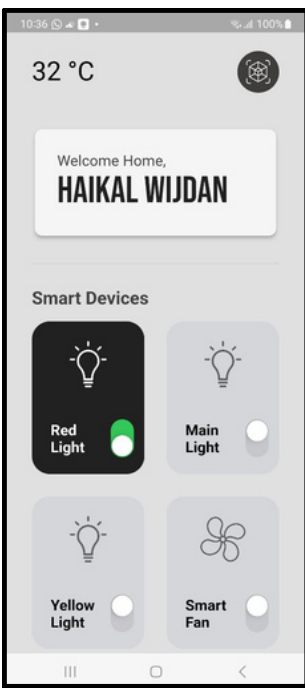
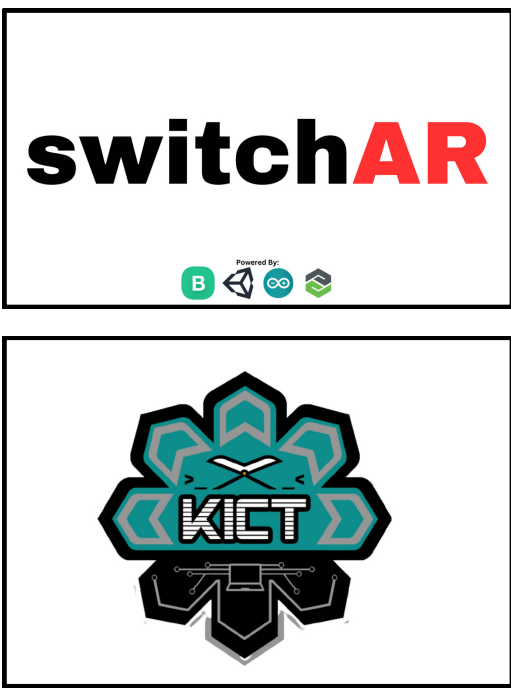
Home Owners

RESULTS

SMART HOME DEVICE



IMAGE TARGET & MOBILE INTERFACES



CONCLUSION

In conclusion, the SwitchAR project **has achieved its objectives by successfully** building an efficient smart home automation device and mobile application. This endeavor involved the seamless integration of augmented reality and the Internet of Things, uniting Unity with AR and Blynk with IoT to create a user-friendly app.



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