



# EARL: Earlham Augmented Reality

## Mobile Application For Better Campus Experience

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### Introduction

Imagine yourself at an unfamiliar place like an university campus. How many days would it take for you to be fully aware of all the buildings on the campus and the resources and facilities they offer?

EARL is a mobile application that is designed to help visitors and new students learn more about Earlham in an efficient manner. By using Augmented Reality technology, the application will save the users from the trouble of taking time to explore the campus. Just by a few touches, the users will be able to see and interact with the most relevant virtual information overlays on their mobile devices.



### Project Goals

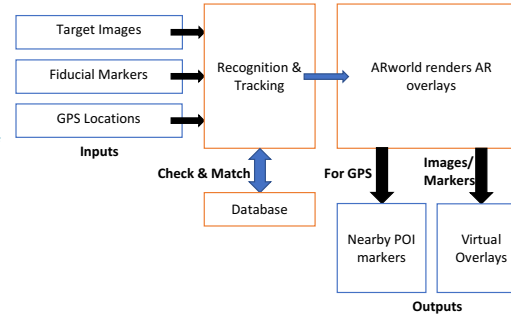
In its final version, EARL will provide two main functions:

1. Detailed information about the buildings on the campus
2. Directions from Point A to Point B

EARL can also provide additional information of objects like posters, flyers, and art installations that often lack the ability to fully provide information because of space limitations.

### Design

- When the application can recognize an input, it will check the database for any information to the input.
- If there is relevant information, it will track the position and orientation of the input object.
- Then a virtual overlay will be augmented on top of the object on the device screen.



### Results

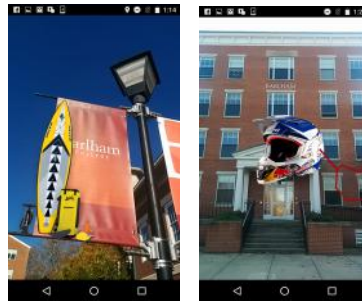


Figure 1 & 2: Image recognition in real world environment

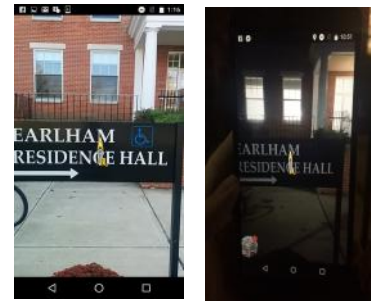


Figure 3 & 4: Image recognition during daytime and night-time



Figure 5,6 & 7: Point of Interest Virtual Markers on Campus

### Future Works

- Cover every building on the campus of Earlham
- Implement the direction function
- Create a virtual map for directions
- Develop a similar app on Apple devices

### Development Tools



### Special thanks to

- Xunfei Jiang
- Charlie Peck
- Wikitude and its community
- CS488 class
- Jose Pareja

### References

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