Augmented Reality Campus Tour App

Overview
The problem that many Penn State students, especially freshmen, have is not knowing the buildings around campus. To address this issue, an idea was proposed to create an application that acts as a form of GPS guidance to direct the students to their destinations. To help them further, augmented reality is incorporated into the app, and students can scan signs of buildings to learn more information about that particular building. Originally, we intended to be able to scan the buildings directly.

Objectives
Our objective is to help out current and future Penn State students in recognizing the buildings around campus. We managed to create an application that has a map of the campus and UI that allows users to either scan for signs using the Augmented Reality camera, explore tours, find destinations, and apply location filters to the map.

Approach
- Conducted a survey to determine the needs of the students
- Made a storyboard that outlines the layout of our application
- Visited our sponsors on a weekly basis to make sure we meet their needs
- Performed research to determine whether a similar project has been done in the past
- Practiced using the software that we needed to build the application
- Added GPS latitudes and longitudes to the app
- Included content about buildings which acts as additional information
- Included an arrow that points to the desired destination
- Implemented tour selection and location filter
- Retrieved output from Penn State students on their views of the app

Outcomes
- The application can now be launched to the app store
- We were able to include building sign scanning with AR, destination selection, tour selection, and a location filter overlaid on a map of Penn State’s campus
- We were not able to track buildings consistently due to the varying weather and time of day