Learning With Augmented Reality 2.0

User Manual

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1- Installing SKOPE-AR

Before starting the process, it is important to note that the application is meant to be used only on smartphones, and although it works in some tablets, it hasn't been tested on those devices yet. This app only works on devices with gyroscope.

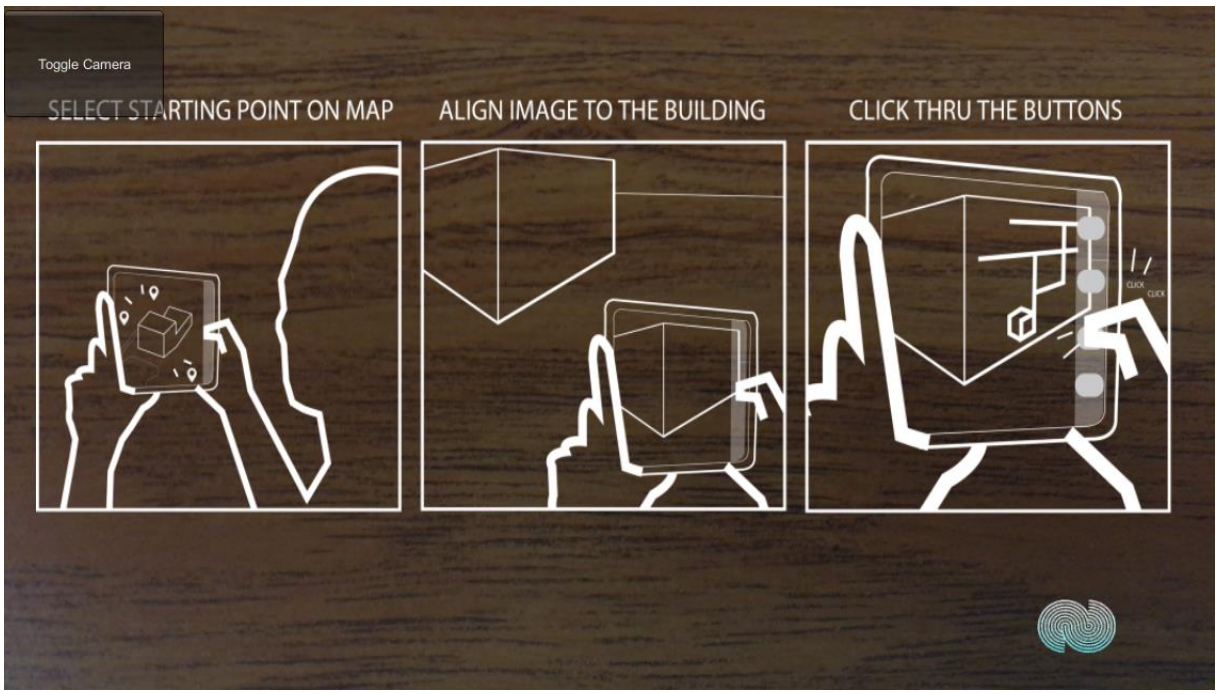
The SKOPE-AR application can be downloaded for both Android and iOS smartphones. The user can go to the Play Store (for Android) or App Store (for iOS) and do a search with the keywords "skope ar". Once the application appears, the user can install it. Since the application is nearly 1GB in size, it is recommended to use WiFi for a faster download and to avoid data usage.

2- Using SKOPE-AR

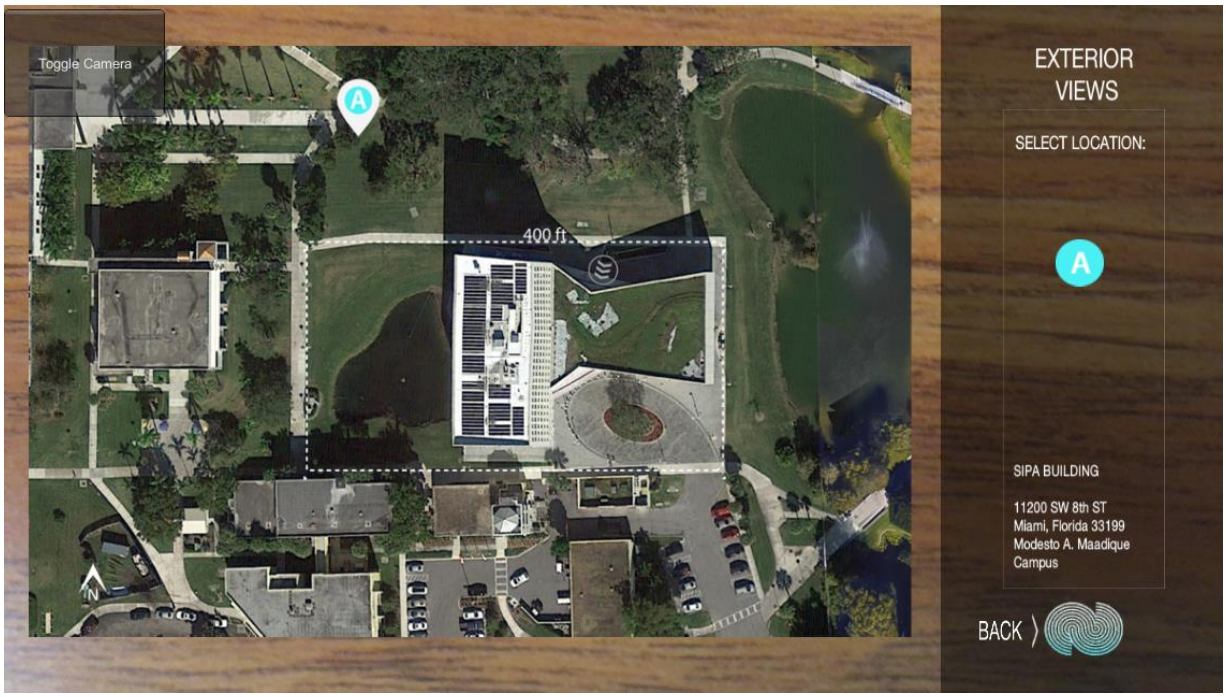
This application can be used where the user wants, but for a better experience, it is recommended to be in the point indicated in the map the application provides.

Once the application is downloaded and installed, the user can open it. The first screen will indicate the name of the application as shown in the picture below.

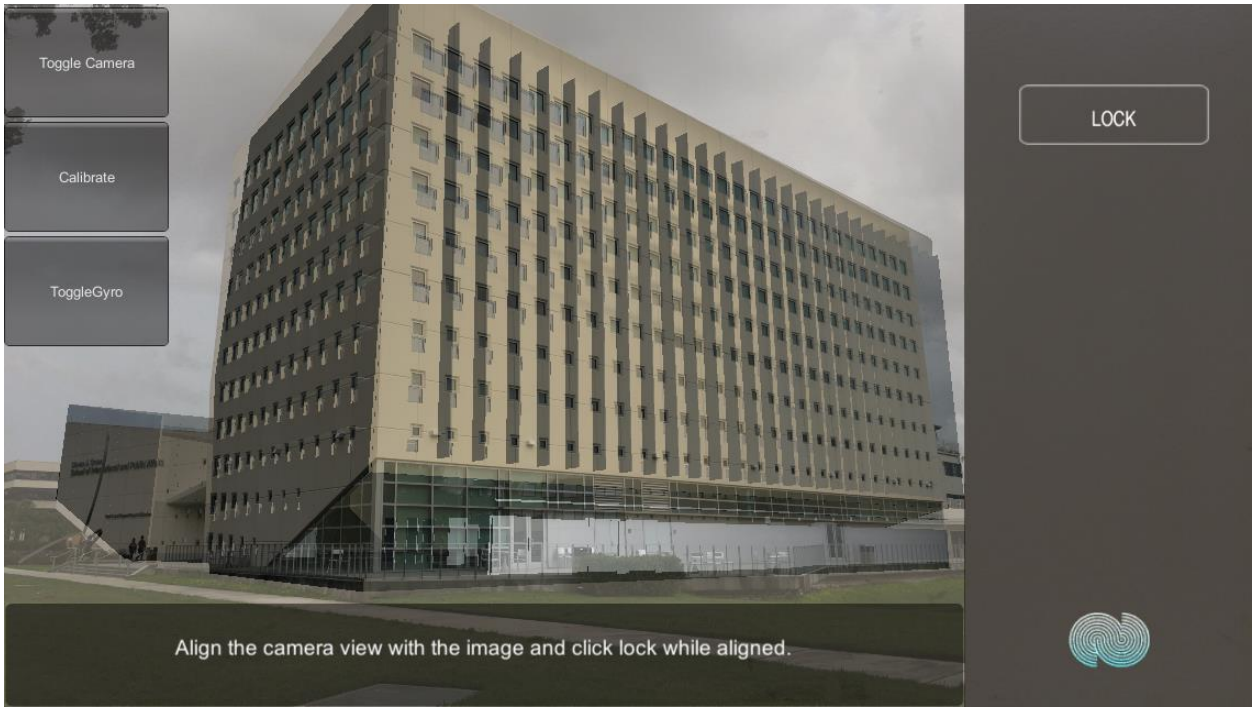
The user can click the bluish button (named the SKOPE button) in the bottom-right corner to go to the next screen shown in the following picture.



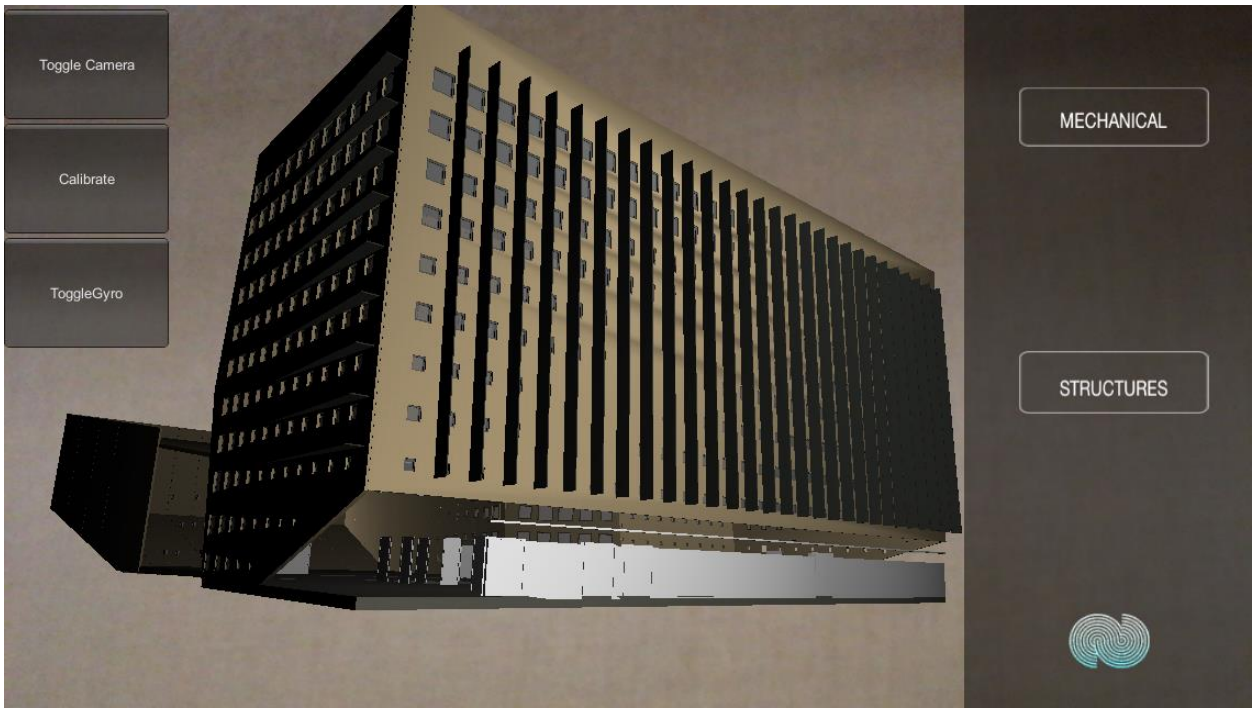
This screen provides a small explanation on how to use the app. Now, the user can click the SKOPE button and go to the Point Selection screen.



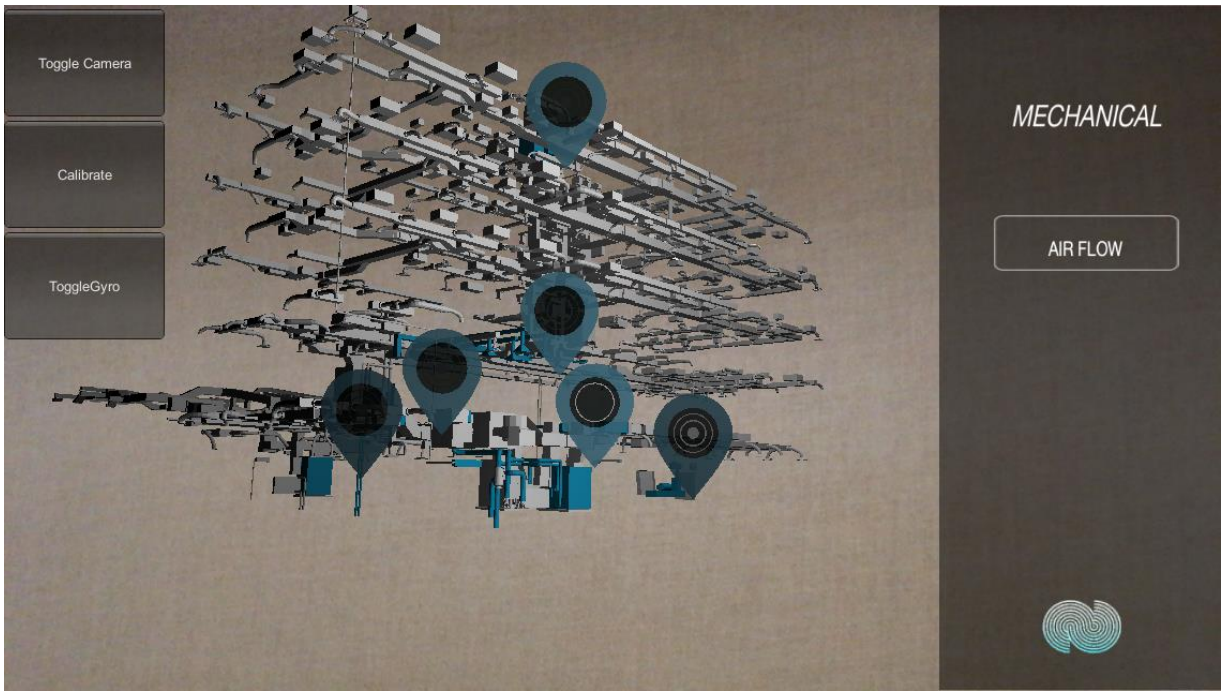
Here, a map is shown with the location of the Point A. The user may want to go there to experience a better learning process when the 3D model of the program overlays the actual building. To continue, the user should click the blue button with the letter A.



The above picture shows the Calibrate screen. In here, the user must point the device to the building and hit the Calibrate button in the top-left corner. After touching that button, the model will be centered in the screen of the smartphone. If the model is not properly overlaying the real building, the user should start tilting the phone and hitting the calibrate button until the model properly overlays the real building. When this happens, the user should click the LOCK button shown in the gray panel. If the user wants to go back, he/she should touch the SKOPE button.

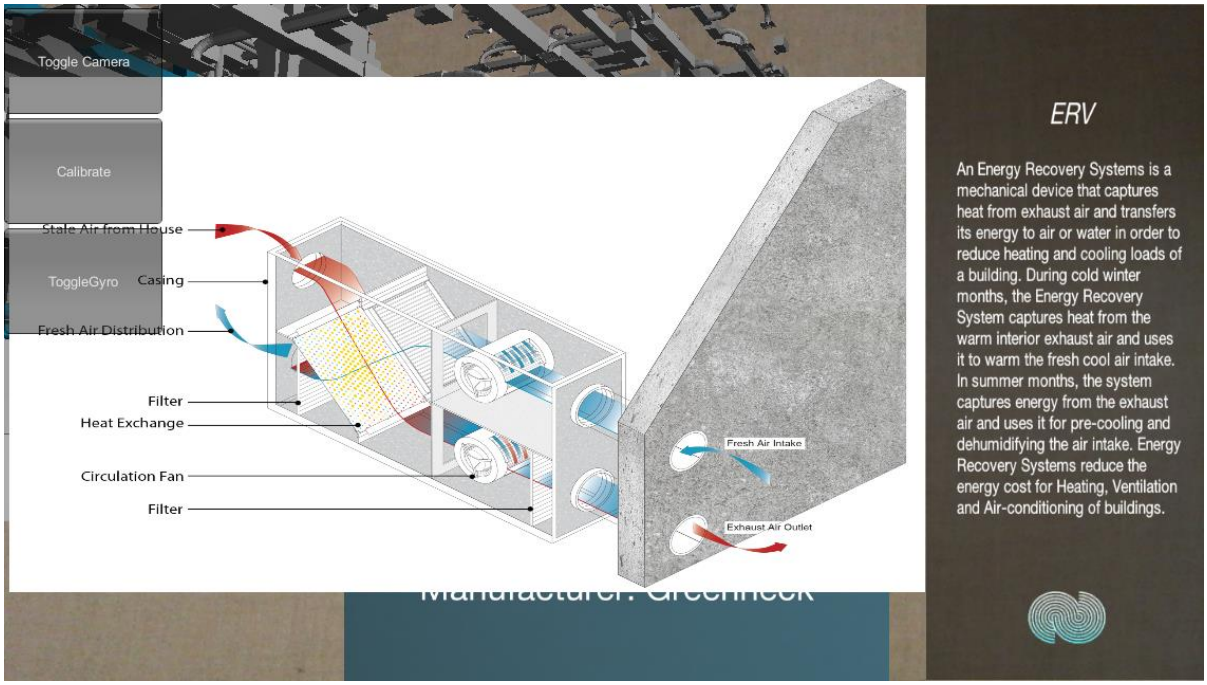


The above picture shows the screen displayed when the user locks the model. A few screens back, the user may have noticed three buttons in the top-left corner. The first one (Toggle Camera) when touched, stops or resumes image capturing with the rear camera of the device. The second one (Calibrate) calibrates the 3D model. The last one (ToggleGyro) stops or resumes reading data from the gyroscope of the device. Three buttons are shown in the right panel: Mechanical, Structures and the SKOPE button if you want to go back. When the Mechanical button is clicked, the model changes and it shows the mechanical structure of the building as the following picture illustrates.

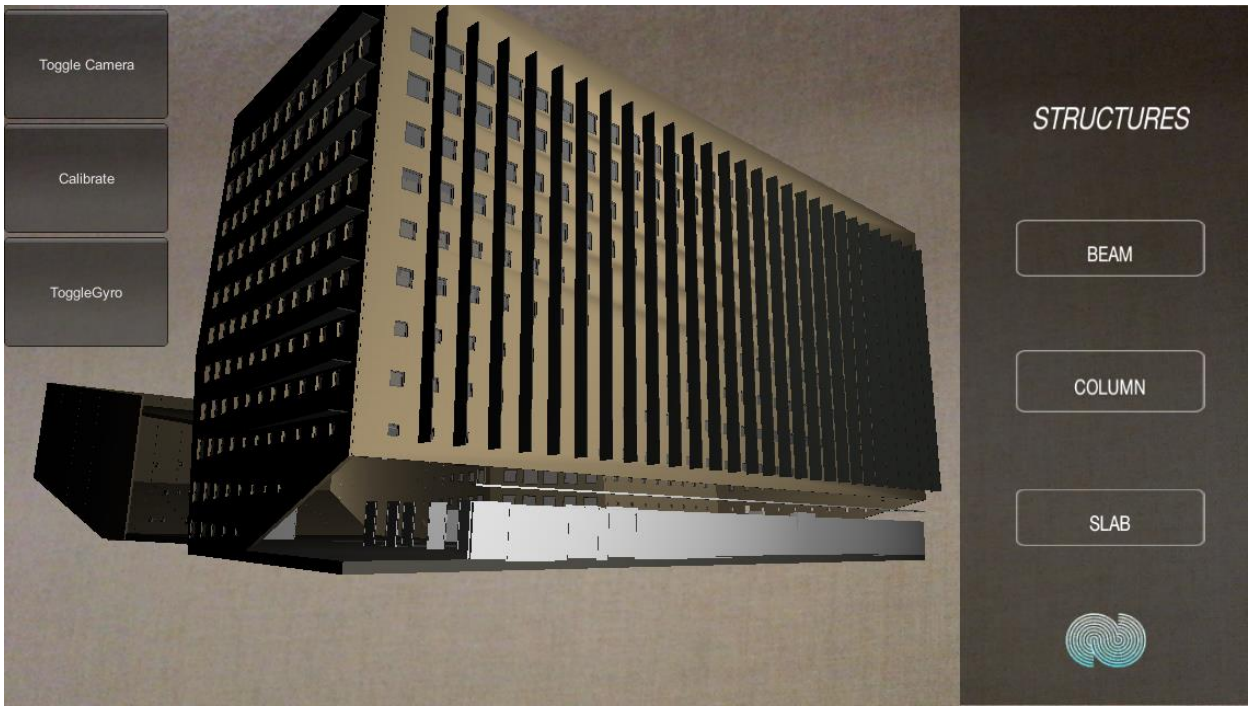


The user can click the Airflow button to show the air flux in the building, or click one of the icons. When an icon is clicked, the camera will zoom in and a small description of that part of the model will show, and for some cases, a Diagram and Movie button will be displayed.

When the user touches the Movie button, a small clip will play showing the interior of that part of the building. If the Diagram button is touched, a bigger description of that part will be displayed as well as a diagram or picture of the part of the building selected (picture below).



If the user wants to, he/she can go from one point to the other. To zoom out and go back, the user should touch the icon that is being displayed. Going back to the panel where the Mechanical and Structure buttons can be found, the user should be able to touch Structures and three new buttons will display as shown below.



If the user clicks on one of the three buttons, a description and a diagram will appear for each as shown in the picture below.