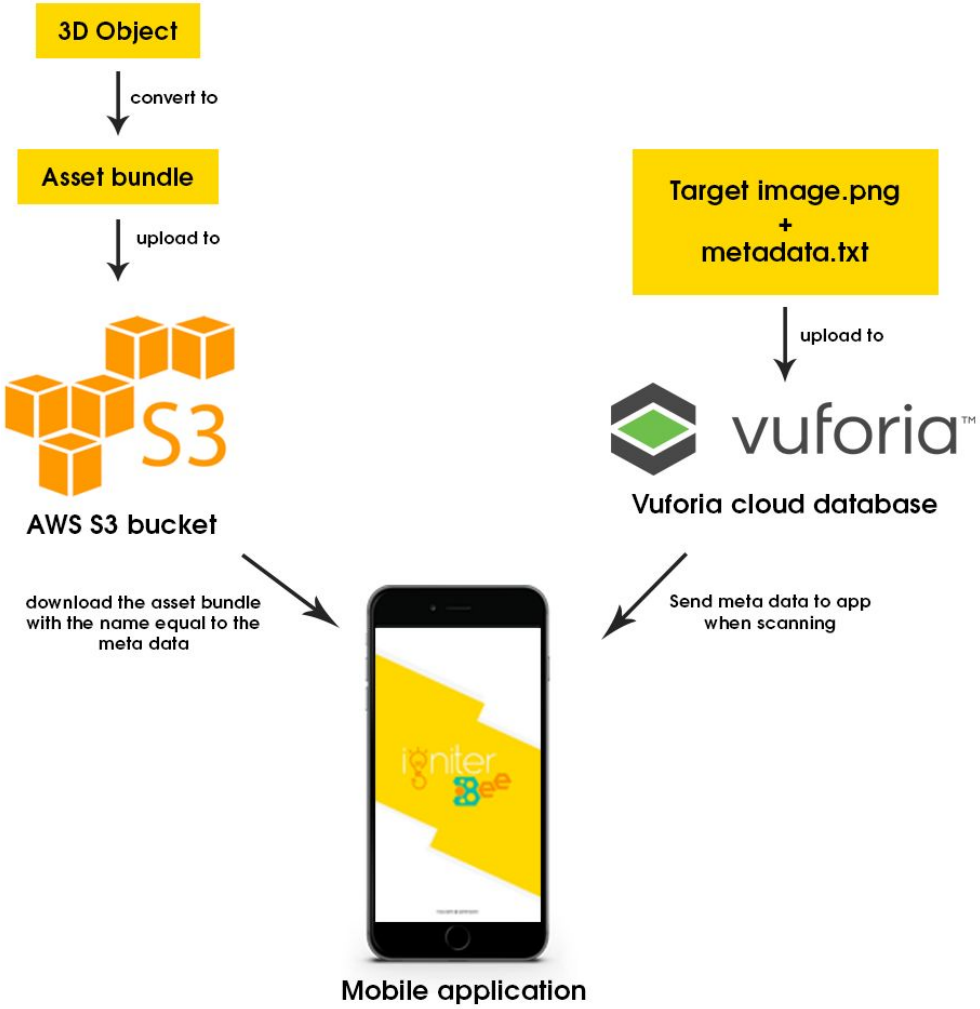
AR based Mobile Application

Architecture

to achieve AR with cloud

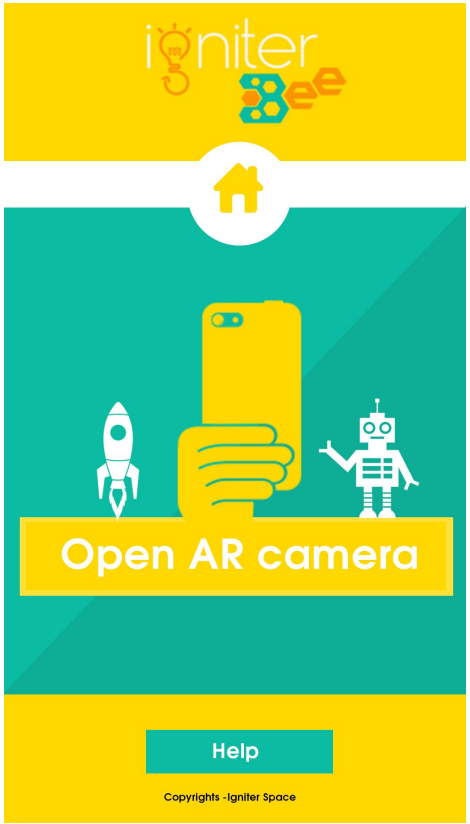

3D Object
convert to
Asset bundle
upload to
S3
AWS S3 bucket
Target image.png
+
metadata.txt
upload to
vuforia™
Vuforia cloud database
download the asset bundle with the name equal to the meta data
Send meta data to app when scanning
Mobile application

The User Interfaces

Splash Screen

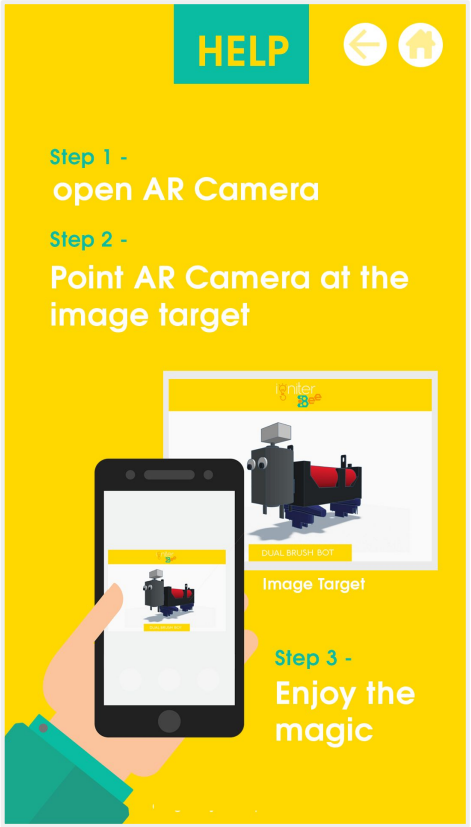
- This screen will appear for 2 seconds when you open the app

Main Menu Screen



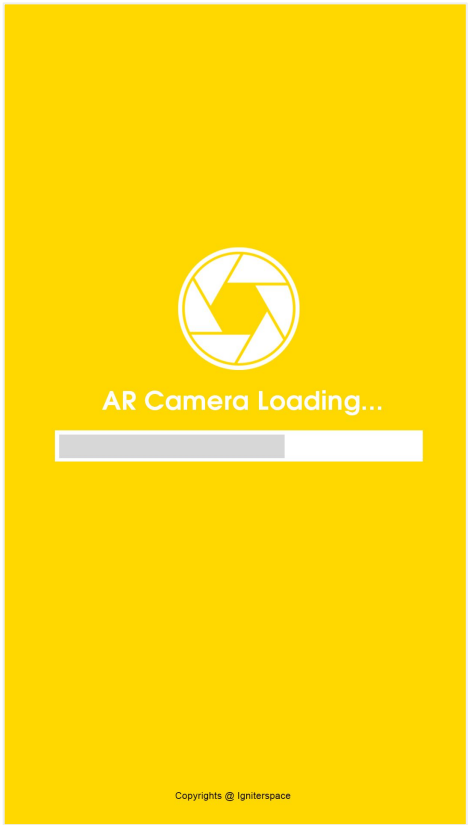
- This screen has buttons to :
  - Go to the AR (Augmented reality) camera
  - Go to help screen

Instructions/Help Screen



- This instruction screen will provide the steps to use the AR camera to view augmented 3d objects

AR camera Loading Screen

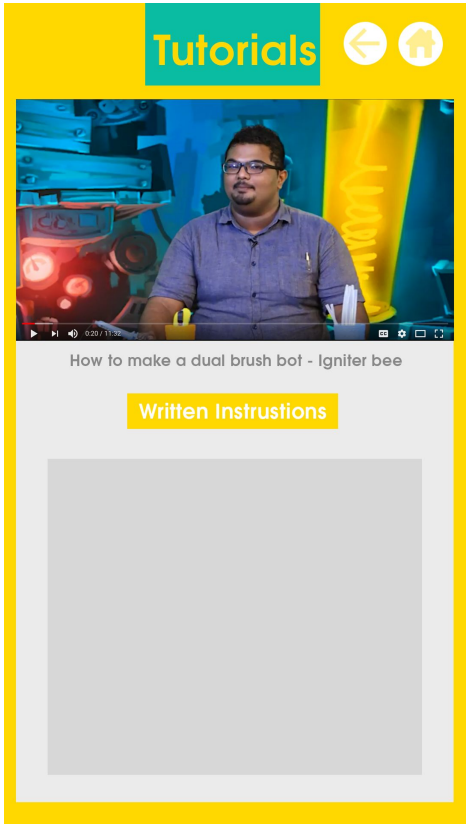


- This screen will appear as soon as the open ar camera button in the main menu is pressed

AR camera Screen

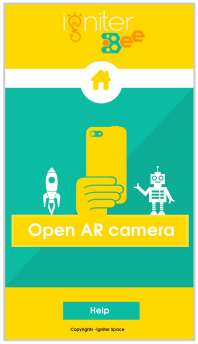
- This AR camera screen - this comes after the loading screen
- On the top , there will be a alert box appearing , which shows detected object
- On the bottom , a button will appear , which can be clicked to go to the tutorial screen

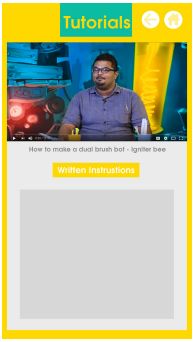
Tutorials Screen(Embedded webview)

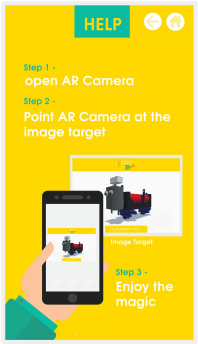


- A **webview** is embedded in the tutorials screen and an external responsive web page is loaded
- The tutorial loaded depends on the target image you scan - The tutorial related to the metadata will be loaded in the web view
- An external web site containing tutorial content must be made in order to use this feature

The flow of the Screens

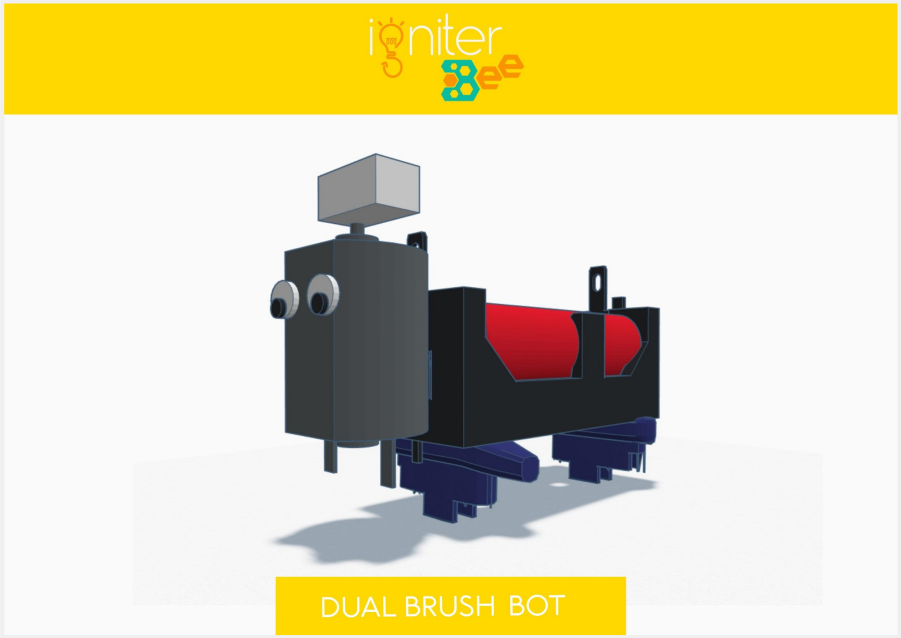






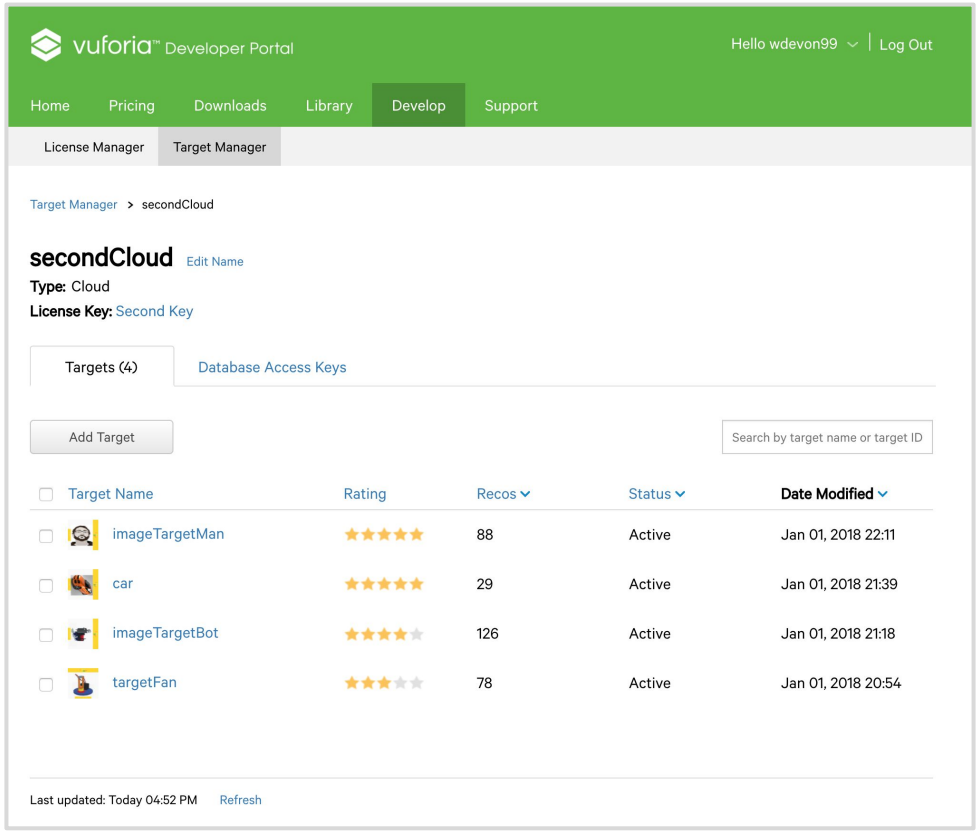
The Image targets

Example of an image target



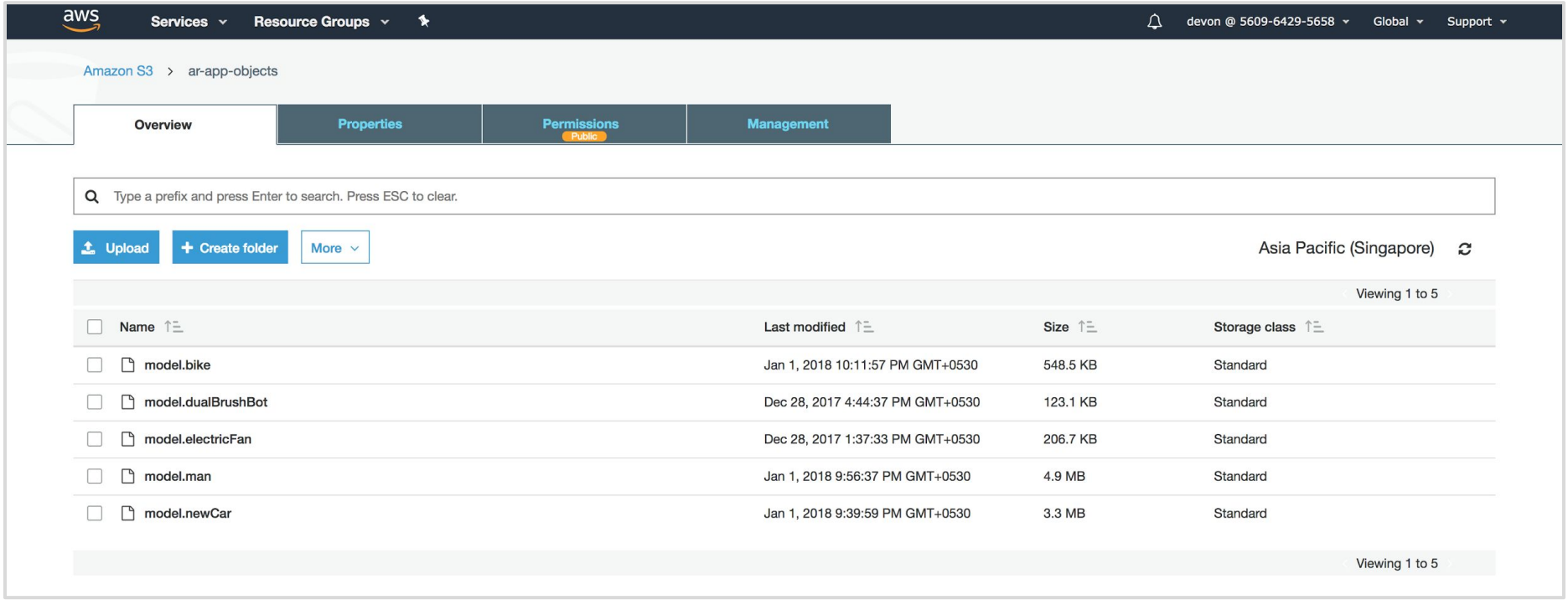
- The user has to point the camera to a image target like the image shown on the left (This picture can be included in the instructions booklet)
- They are uploaded in **Vuforia cloud recognition database** and contains a **metadata** text file ,which contains the EXACT name of the assetbundle of the object to be displayed on top of it

Screenshot of Vuforia image target cloud database



The Asset bundles

Screenshot of asset bundles uploaded in the AWS s3 bucket



NOTE :

* Asset bundles should have the exact same name as the name stated in the metadata in vuforia image targets.

Eg : model.dualBrushBot (the blue text should be the same name as metadata name value)

* And when creating asset bundle , the object name should also have the exact name as metadata

Assetbundle name == object name == metadata