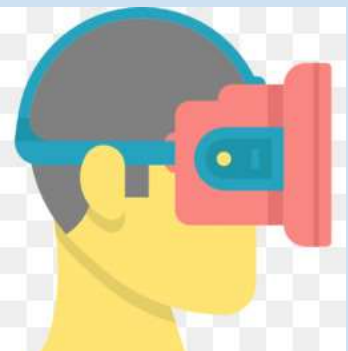




Augmented Reality

Best AR SDK – an review

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Best AR SDK – an review

<https://thinkmobiles.com/blog/best-ar-sdk-review/>



Wikitude

- **Supported platforms:** Android, iOS, Windows for tablets, smart glasses
- **Features :**
 - Scene recognition (augment large objects for outdoor gaming, construction, etc.),
 - New extended recording and tracking of objects (scan and see augmented objects beyond markers),
 - Instant targets (save and share instant augmentations),
 - Unity live preview (AR-view feature into Unity editor to test the SDK features),
 - Windows support.

- With over 1 billion app installs and as one of the fastest-growing AR ecosystems
- Free with watermark



ARKit -Augmented Reality development for iOS

- **Pricing:** free / \$99 annual developer program for distribution.
- June 2018 Apple launched – ARKit 2 version
- ARKit supports 2-dimensional image detection (trigger AR with posters, signs, images), and even 2D image tracking, meaning the ability to embed objects into AR experiences.
- SDK allows developing apps that would recognize spaces and 3D objects, as well as place virtual objects on surfaces.



E.g. Ikea Place app, where one can place virtual furniture items in his/her own real space.



ARCore - Google's response to ARKit

- **Supported platforms:** Android 7.0 and higher, iOS 11 or higher.
- **Three core capabilities**
 - Motion tracking – to track phone's position relative to the surroundings.
 - Environmental understanding – to detect the size/location of surfaces, from horizontal and vertical, to even angled surfaces.
 - Light estimation – to estimate the real-life lighting conditions.
- **Pricing : Free**



- In essence, ARCore is based around 2 elements
 - real-time position tracking and
 - integration of virtual and real objects
- examples [Just A Line](#) app, [ARuler](#) app, [Ikea Place](#).



Vuforia

- **Supported platforms:** Android, iOS, UWP and Unity Editor
- **functionalities:**
 - recognition of the different types of visual objects (a box, cylinder, plane),
 - text and environments recognition,
 - VuMark (a combination of picture and QR-code).
- Vuforia Object Scanner, you can scan and create object targets.
- The recognition process can be implemented using the database (local or cloud storage).



- Unity plugin is simple to integrate and very powerful.
- Pricing – free with watermark



Other popular SDK for AR development

- EasyAR
- ARToolKit
- Xzing
- NyARToolkit
- Kudan
- Maxst





Some resources to help in deeper understanding

- [Interactive 3D Graphics](#) — A Udacity course teaching basic principles of 3D computer graphics (meshes, transforms, materials, and more).
- [Beginning with 3D WebGL](#) — A series of posts written by Rachel Smith, teaching Three.js basics with a lot of code examples.
- [Three.js 101: Hello World!](#) — An introduction to Three.js. @necsoft talks about all the important stuff in one blog post.
- [Linear algebra — Khan academy](#) — The lower you go on abstraction level, the greater the mathematical knowledge required from you. From my experience, if you want to strengthen your math knowledge, Khan Academy is your best friend.
- [Building a Minecraft demo with A-Frame](#) — An example of how to implement a VR Minecraft demo using A-Frame. This step by step guide will help you better understand how to build a robust VR app with A-Frame.