

Advanced Topics in Android App Development



Augmented Reality?

What is Augmented Reality?

- Augmented reality(AR) is a field of computer research which deals with the combination of real-world and virtual object.



Vuforia

- Vuforia is one of the most popular platforms to help you work with augmented reality development.
- Vuforia can recognition many kind of makers: 3D objects, Images, Cylinders, Text, and VuMarks.
- Supported platforms: Android, iOS, UWP, and Unity.



Wikitude

- Wikitude is a mobile augmented reality technology provider based in Salzburg, Austria.
- Wikitude implements simultaneous localization and mapping (SLAM) technology to instantly track the world without markers.
- Supported platforms: Android, iOS, Smart Glasses, and Unity.



wikitude
See more.

ARCore

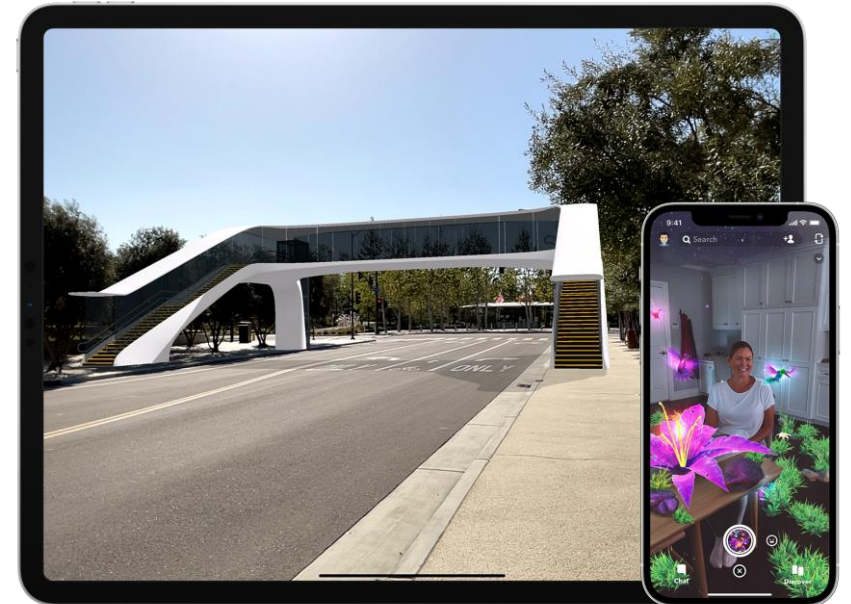
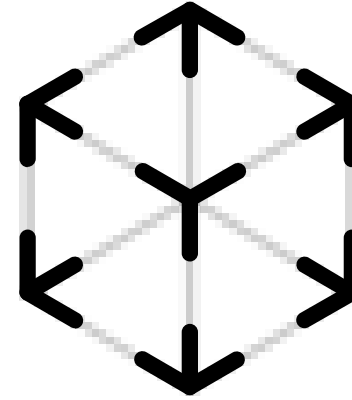
- ARCore is a platform, developed by Google, for building augmented reality apps on Android.
- ARCore use concurrent odometry and mapping (COM) technology to understand where the phone is relative to the world around it.
- ARCore can detect planes and the lighting of its environment.
- Supported platforms: Android, Android Studio, Unreal, and Unity.



ARCore

ARKit

- ARKit is a platform, developed by Apple, for building augmented reality apps on iOS.
- ARKit uses Visual Inertial Odometry (VIO) technology to accurately track the world around it.
- ARKit also detect horizontal planes, and estimate the lighting of its environment using camera sensor.
- Supported platforms: IOS.



Introduction to ARCore Augmented Faces, Android



- <https://developers.google.com/ar/develop>

Deploy machine learning models on mobile

Tensorflow Lite

- TensorFlow Lite is an open source deep learning framework for on-device inference.
- Supported platforms: Android, iOS

Introducing TensorFlow Lite



- <https://www.tensorflow.org/lite>

Train and deploy a custom TensorFlow Lite model



- https://www.tensorflow.org/lite/examples/object_detection/overview

Jetpack

What is Jetpack?

- Jetpack is a suite of libraries to help developers follow best practices, reduce boilerplate code, and write code that works consistently across Android versions and devices so that developers can focus on the code they care about.

Jetpack components

