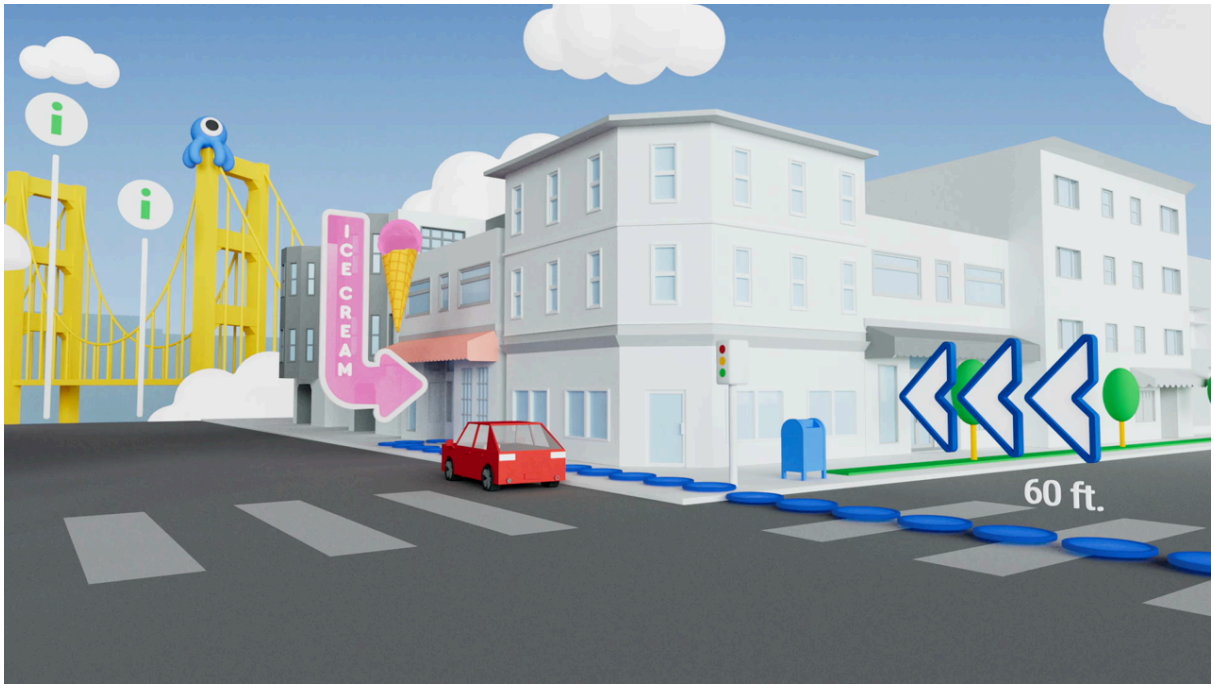
Overview of ARCore and supported development environments



ARCore is Google's platform for building augmented reality experiences. Using different APIs, ARCore enables your phone to sense its environment, understand the world and interact with information. Some of the APIs are available across Android and iOS to enable shared AR experiences.

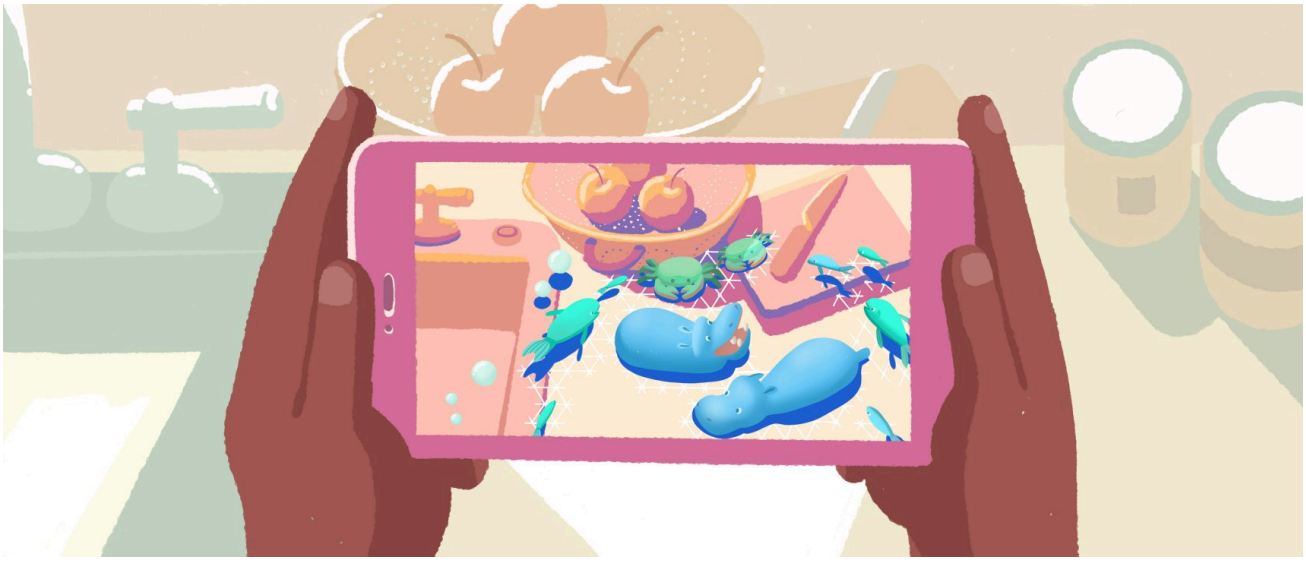
ARCore uses three key capabilities to integrate virtual content with the real world as seen through your phone's camera:

- **Motion tracking** (/ar/discover/concepts#motion_tracking) allows the phone to understand and track its position relative to the world.
- **Environmental understanding** (/ar/discover/concepts#environmental_understanding) allows the phone to detect the size and location of all type of surfaces: horizontal, vertical and angled surfaces like the ground, a coffee table or walls.
- **Light estimation** (/ar/discover/concepts#light_estimation) allows the phone to estimate the environment's current lighting conditions.

Supported devices

ARCore is designed to work on a wide variety of qualified Android phones running Android 7.0 (Nougat) and later. A full list of all supported devices is available here (/ar/discover/supported-devices).

How does ARCore work?



Fundamentally, ARCore is doing two things: tracking the position of the mobile device as it moves, and building its own understanding of the real world.

ARCore's motion tracking technology uses the phone's camera to identify interesting points, called features, and tracks how those points move over time. With a combination of the movement of these points and readings from the phone's inertial sensors, ARCore determines both the position and orientation of the phone as it moves through space.

In addition to identifying key points, ARCore can detect flat surfaces, like a table or the floor, and can also estimate the average lighting in the area around it. These capabilities combine to enable ARCore to build its own understanding of the world around it.

ARCore's understanding of the real world lets you place objects, annotations, or other information in a way that integrates seamlessly with the real world. You can place a napping kitten on the corner of your coffee table, or annotate a painting with biographical information about the artist. Motion tracking means that you can move around and view these objects from any angle, and even if you turn around and leave the room, when you come back, the kitten or annotation will be right where you left it.

For a more detailed breakdown of how ARCore works, check out fundamental concepts (/ar/discover/concepts).

ARCore provides SDKs for many of the most popular development environments. These SDKs provide native APIs for all of the essential AR features like motion tracking, environmental understanding, and light estimation. With these capabilities you can build entirely new AR experiences or enhance existing apps with AR features.

Android
(/ar/develop/java/quickstart)

Android NDK
(/ar/develop/c/quickstart)

Unity (AR Foundation)
(/ar/develop/unity-arf)

iOS
(/ar/develop/ios/session-config)

Unreal
(/ar/develop/unreal)

Web
(/ar/develop/webxr)

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