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Basic AR interaction options

The following list offers some of the major examples of the types of interaction options AR app creators can give users. Treat this as a starting point rather than a complete list; mobile AR is young, and creators are discovering new interaction mechanics all the time.

1. **Drag and Drop:** This feature lets users drag and drop objects from a menu of 3D digital assets “onto” the screen to place them on a real world surface (that has been spatially mapped by ARCore).
2. **Voice:** Voice is quickly emerging as a powerful interaction tool that creators can build into AR apps. Building in pre-programmed voice commands allows users to execute specific actions within the AR app. This is often best achieved by embedding the Google Assistant SDK to add voice-enabled smart interaction
3. **Tap:** With the tap mechanic, users can place objects in the real world by tapping on the screen. ARCore uses raycasting (the use of ray-to-surface as an intersection test), and projects a ray to help estimate where the AR object should be placed in order to appear in the real-world surface in a believable way. Another way to use tap is as a mechanic to interact with a digital object that is already placed in the scene. For example, maybe the app allows users to animate a 3D object when users tap on it.
4. **Pinch and Zoom:** Pinch and zoom lets users enlarge or scale down a 3D object—or use the interaction in creative ways to build a game or user experience. For example, this could be used to pull back the string of a bow in a bow-and-arrow target game.
5. **Slide:** Users can interact with 3D objects through sliding, which translates (or moves) objects in-scene, or use it as a game mechanic. For example, say you are creating an AR paper toss game. You could enable a slide interaction to let users project or throw papers into a trash can.
6. **Tilt:** Using the accelerometer and gyroscope, a tilt of the phone can also be used as an input for creative interactions. An easy example would be to make a “steering wheel” mechanic for a racing tabletop AR game.

✓ **Completed**

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