Using a Android phone or tablet as a sensor shield for the Arduino.

Modern Phones and tablets are packed full of sensors, Accelerometers, gyroscope, touch pads, buttons, gps, display, compass, date, time, light, audio, temperature, humidity, orientation, etc

There are 3 projects that will allow you to use the Android tablets/phones as sensors, all of them work more or less the same way, but 2 of them require a “special” shield. One just uses a HC-05 Bluetooth on the Arduino. It does a little less than the others, but it’s also cheap to do, and the app for the phone is free.

SensoDuino - FREE - can access up to 12 sensors on the phone/tablet and uses a simple HC-05 bluetooth.

<http://www.techbitar.com/sensoduino.html>

<https://play.google.com/store/apps/details?id=com.techbitar.android.sensoduino>

1Sheeld - has a special shield, but is an open source project, so you could technology build your own, the 1Sheeld Shield uses a HC-06 Bluetooth.

The app for the phone has a few more sensors, but is still limited to what type of sensors are in the phone or tablet.

<http://1sheeld.com/>

<https://play.google.com/store/apps/details?id=com.integreight.onesheeld>

The phone app is free, the 1sheeld retails for $55.

Annikken - This works pretty much like the other two, it does seem to have access to a few more sensors if they are in your phone, and the app looks like it’s more advanced than either of the other two, Looks like you can make your own U.I.s, And looks like this was also made for use with iOS devices

The Annikken also uses it’s own shield on the Arduino. The shield retails for $79 (looks like there are two shields, one for Android, and one for iOS which could lead to some confusion, or a lot of extra expense if you own both devices)

<http://www.annikken.com/>

<https://play.google.com/store/apps/details?id=com.annikken.andee>

(Called Anikken Andee in the play store)

The limitation to any of these is that if your phone doesn’t have that sensor in it, then the app can’t use it. From the limited testing I’ve done with SensoDuino I have found that it doesn’t support all of the sensors that are in some phones, but does support most of them.

GPS sometimes becomes an issue with it, needing a couple of extra steps to get it to work.

Over all thou this is a fun neat way to use the sensors from your phone.