

# A DIY Approach to Internet of Things Using Commercially Available Microcontrollers and Beginner-Friendly App Development

Erin Bryson, Catherine Anderson, PhD, Brent Garner

Department of Electrical Engineering and Computer Science, College of Engineering and Computer Science, McNeese State University

#### What is IoT?

In the simplest terms, the Internet of Things (IoT) is a "network of everyday devices, appliances, and other objects equipped with computer chips and sensors that can collect and transmit data through the internet."<sup>2</sup>

### What is it Made With?

- Adafruit Feather M0 WiFi
- Blynk Application for Smartphone
- WS2811 Individually Addressable LEDs
- Resistors (560  $\Omega$  and 10 k $\Omega$ )
- Male to Male Jumper Wires
- 1000 μF Capacitor
- Breadboard
- Power Supplies (5v and 3.3v)
- 10 mm LEDs (Red and Green)

#### **How it All Connects**

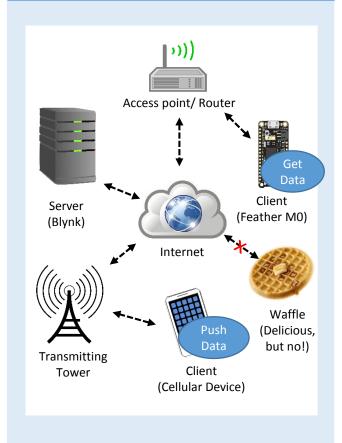


Figure 1: Simplified Diagram of Network

## What is Blynk?

"Blynk is a Platform with iOS and Android apps to control Arduino, Raspberry Pi and the likes over the Internet."<sup>1</sup>

By providing a free, simple dragand-drop graphic interface for app development, Blynk in a great option for IoT projects! It also provides device security through token authentication.

#### References

- 1. <a href="https://www.blynk.cc">https://www.blynk.cc</a>
- 2. <a href="http://www.dictionary.com/browse/intern">http://www.dictionary.com/browse/intern</a> et-of-things?s=t

