

Internet Data Display Lamp

Objective

Design and implement a Smart Lamp that notifies user based on the selected data trend such as Stock, Weather Forecast or Outdoor Temperature Reading with different kind of lighting animations.

Technology used:

- Wireless Technology
- Internet of Things
- Mobile Application Control



Cloudy
at the moment

Rain
approaching
Within 2 hour

It provides useful real-time information that can be crucial to user. User can control the information to be displayed via Android phone.

The Raspberry Pi setup a access point for communicating with all the devices and obtain specific API . Google Firebase Database was used to setup a communication between the Android phone and Raspberry Pi. The Arduino (which control the type of lighting animation to be displayed) was connected to Raspberry Pi Via Serial Communication. The LEDs Stripe was connected to Arduino via pulse width modulation pin on Arduino.