# SolarGuardn Roadmap

## Config

WIFI

MQTT

BETWEEN

Fahrenheit

Sensor pins

## Setup

Serial begin

Read config

Set default hostname if null

WiFi begin

MDNS begin

Debug telnet begin

Get location

Config ntp

OTA begin

MQTT connect

GPIO pin modes

Sensor initialize

WWWserver begin

Uptime initialized

Output banner/crash info

## Loop

Restart ESP on null IP

OTA, MQTT, Debug, WWW … handle

Recheck time zone after 2am

Restart loop unless read interval reached

Read sensors

Construct JSON array with sensor data

Publish JSON to MQTT

Blink built-in LED

## Functions

UrlEncode

getIPlocation

getLocation

getTimeZone

setNTP

uptime

mqttConnect

mqttPublish

espStats

ttime

handleWWW

## Includes

ESP8266WiFi.h <https://github.com/esp8266/Arduino>

ArduinoJson.h <https://github.com/bblanchon/ArduinoJson>

BME280I2C.h <https://github.com/finitespace/BME280>

EspSaveCrash.h <https://github.com/krzychb/EspSaveCrash>

PubSubClient.h <https://github.com/knolleary/pubsubclient>