Milestone 3

1 December 2024

Deadline: Saturday 14 December

1 Introduction

Internet of Things (IoT) strives to connect devices remotely for seamless functioning and ease of operations. An IoT platform bridges the gap between device sensors and data network. It provides insight into the data used in backend application. This platform helps in managing devices, remotely collecting data and securing connectivity.
In the previous milestone, every team built a simple IoT application. The application was used to monitor the temperature values for a specific area to be sent to a server. The application was a Python Server and ESP8266 Wi-Fi modules connected with temperature sensors. Also, the Python Server works only on local networks. Assuming your application has hundreds of IoT sensor modules such as ESP8266 Wi-Fi modules, massive volumes of data are generated. The data needs to be monitored with a good interface. The data should be accessed anywhere and anytime.

2 Requirements

The main objective of this milestone is to build a complete IoT system. In this milestone, you are going to connect your ESP module to an IoT platform. You are going to use ThingsBoard, an IoT platform that will replace your Python Server.

1. Sign-up for a Community Edition Live Demo account on Thingsboard IoT platform.
2. Send the readings obtained by ESP8266 to Thingsboard IoT platform every constant time interval. (30 seconds for example).
3. Thingsboard IoT platform should monitor the temperature values sent from the ESP module.
4. After sign-up, you can follow this Youtube video
5. You should customize a dashboard with nice user interface containing both devices monitoring info, here is an example

3 Submission

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1. Submit the new micropython file to your drive.
2. Submit a screen shot from your dashboard showing how it changes when varying temperature.

Goodluck!