**Machine Learning for IoT——HW3**



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| *Gaetano Salvatore Falco* | *Zafar Abdirasulov* | *Kuerxi Gulisidan* |
| *S280209* | *S301367* | *S304915* |

**Exercise 1 - Data Collection, Communication, and Storage**

The reason why MQTT is a better choice than REST as the communication protocol for this application is because MQTT can send and receive data with very low processing power and devices can communicate with each other even with poor internet connection.

MQTT’s Broker can make multiple devices receive data as soon as another device changes state or decides to send data to the Broker, and the devices that we need to communicate to each other constantly, MQTT can help us achieve this in an easy way.

**Exercise 2 - Data Management & Visualization**

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| **Method** | **Endpoint** | **Description** |
| **GET** | **/devices** | Retrieve the list of MAC addresses of the monitored devices. |
| **PUT** | **/device/{mac\_address}** | Retrieve battery status information of the device with thespecified MAC address in the specified time range |
| **DELETE** | **/device/{mac\_address}** | Delete the timeseries associated to the specified MAC address. |

**GET:**

By definition of GET method, we know that it should only retrieve data and should have no other effect, so from description we understand we only need to retrieve the list of MAC address, so we choose the GET method

**PUT:**

**DELETE:**

Because we need to delete the timeseries, so we choose the DELETE method