Machine Learning for Internet of Things 2024-2025 Homework3, Group 4

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I. COMMUNICATION PROTOCOL

The MQTT protocol is a better choice than REST as it is more efficient for the following reasons:

- The protocol uses a persistent connection, which means that establishing the connection must be done only once, while REST needs to connect each time a request is sent.
- A publisher will only send data and never receive one, so it is never listening to new requests, which requires some energy consumption. On the opposite, using the REST protocol forces the device to constantly listen.
- The MQTT protocol has offline support in case of poor internet connection, limiting the data loss, while REST doesn't.
- The MQTT protocol requires little power as the data transmitted only lies in a small header, without any handshake, while REST is heavier and requires multiple handshakes to ensure the data transmission.
- The MQTT protocol allows easy scaling as the publisher-subscriber model makes it very easy for a subscriber to catch the data coming from multiple devices.

II. HTTP METHOD

The GET method is the most suitable for asking for data as the PUT, POST and DELETE methods are used to create, alter or remove some resources while the GET method is used to ask for a piece of information.