Air Quality Monitor

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General description

The Air Quality Monitor application allows the user to perform several actions related to the consultation and downloading of data acquired by the system sensors, depending on the type of user. The information can be presented in tabular or graphical form, and researchers can download the data in tabular form. The system allows the administration of the sensors, indicating the type of data to be acquired individually.

Requirements by user type

1. Guest

1.1. Can access the current sensor data through 3 elements:

1.1.1. Current global data: indicates the average values of the last hour of all sensors concerning temperature, humidity, PM 2.5 and PM 10.

1.1.2. Graphs: Indicates the average values of all sensors concerning temperature, humidity, PM 2.5 and PM 10, these can be specified in time periods and grouped by:

1.1.2.1. Daily: Hourly average.

1.1.2.2. Weekly: Daily average

1.1.2.3. Monthly: Weekly average

1.1.2.4. Annual: Monthly average

1.1.3. Map: Indicates separately the values of each sensor, pressing on the marks of each sensor shows the measurements registered by that sensor, these can be specified in periods of time and grouped by:

1.1.3.1. Daily: Hourly average.

1.1.3.2. Weekly: Daily average

1.1.3.3. Monthly: Weekly average

1.1.3.4. Annual: Monthly average

2. Researchers:

2.1. Signed access to the system

2.1.1. Can register as a researcher with a user name and password, as well as your profile.

2.1.2. Can modify your profile.

2.1.3. Can change your password.

2.2. Can access the current sensor data by means of 3 elements:

2.2.1. Current global data: shows the average values of the last hour of all sensors concerning temperature, humidity, PM 2.5 and PM 10 2.2.2.

2.2.2. Graphs: Indicates the average values of all sensors concerning temperature, humidity, PM 2.5 and PM 10, these can be specified in time periods and grouped by:

2.2.2.1. Daily: Hourly average.

2.2.2.2.2. Weekly: Daily average

2.2.2.3. Monthly: Weekly average

2.2.2.4. Annual: Monthly average

2.2.3. Map: Indicates separately the values of each sensor, pressing on the marks of each sensor shows the measurements registered by that sensor, these can be specified in periods of time and grouped by:

2.2.3.1. Daily: Average per hour

2.2.3.2. Weekly: Daily average

2.2.3.5. Monthly: Weekly average

2.2.3.4. Annual: Monthly average

2.3. Sensors

2.3.1. Can view in tabular form the data of a sensor within a set period of time.

2.3.2. Can download in a file the data of a specific sensor within a set period of time.

2.3.3. Can view in graphical form the data of a specific sensor within a set period of time.

3. Administrator:

3.1. User control

3.1.1. Can register as a researcher with a user name and password, as well as your profile.

3.1.2. Can modify your profile.

3.1.3. Can change your password.

3.1.4. Can change the password of a researcher.

3.1.5. Can create and delete researcher's accounts

3.2. Can access the current sensor data by means of 3 elements:

3.2.1. Current global data: indicates the last hour's average values of all sensors concerning temperature, humidity, PM 2.5 and PM 10 3.2.2.

3.2.2. Graphs: Indicates the average values of all sensors concerning temperature, humidity, PM 2.5 and PM 10, these can be specified in time periods and grouped by:

3.2.2.1. Daily: Hourly average

3.2.2.2. Weekly: Daily average

3.2.2.4. Monthly: Weekly average

3.2.2.5. Annual: Monthly average

3.2.3. Map: Indicates separately the values of each sensor, pressing on the marks of each sensor shows the measurements registered by that sensor, these can be specified in periods of time and grouped by:

3.2.3.1. Daily: Hourly average

3.2.3.2. Weekly: Daily average

3.2.3.3. Monthly: Weekly average

3.2.3.4. Annual: Monthly average

3.3. Sensors

3.3.1. Can view in tabular form the data of a sensor within a set period of time.

3.3.2. Can download in a file the data of a specific sensor within a set period of time.

3.3.3. Can view in graphical form the data of a specific sensor within a set period of time.

3.3.4. Can add new sensors.

3.3.5. Can delete sensors

3.3.6. Can activate or deactivate sensors.

3.3.7. Can add or delete which data is being measured on a sensor