

EDUCATION INSTITUTION INTERNET OF THINGS (IOT) ONLINE DASHBOARD FOR ACADEMIC DATA SHARING

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Highlights: Various Internet of Things (IoT) devices are currently being developed by academicians and students wise for various type of research. However, platform for sharing the results and data in form of visualisations and raw data is limited, while some involve commercial elements which restricts the freedom as academicians. This project proposes an Education Institution IoT Online Dashboard for academic data sharing. Academicians and students have the freedom to share the results of their research using the dashboard, thus increasing public exposure for their academic projects.

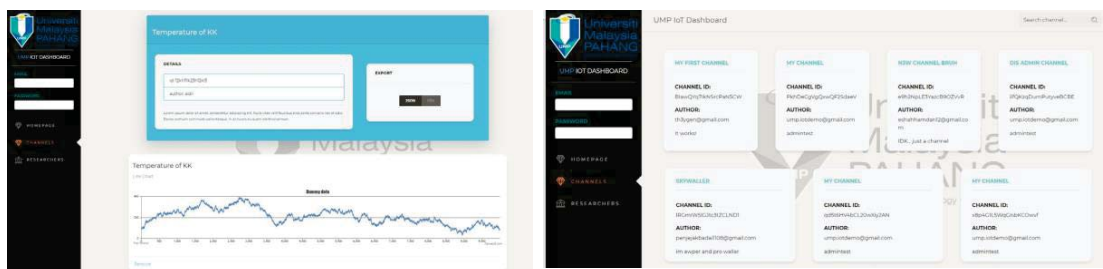
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Introduction

Internet of Things (IoT) has become a niche area within many disciplines of research. As a method of efficient real-time data gathering, IoT devices have been developed and implemented for the purpose of surveillance, analysis, maintenance and education. However, current trends of IoT devices restrict the users to individuals who are deploying such device, limiting access to information by other parties, while others involve commercial elements. Current trend in multidisciplinary research involves academicians and students to dive into information that diverse from their main discipline. For example, agriculture researchers and students might require data obtained through sensors developed by engineering researchers. However, not every researcher has access to such a big network of academicians to obtain such data, while some might not be as reliable due to questionable sources.

This research intends to provide a platform for sharing research data, with reliable sources, which is the education institution itself, towards public inform of visualisation and data bank dashboard. The Education Institution Internet of Things (IoT) Online Dashboard will provide data sharing, in form of visualisation and data, while providing public feedback to the source researchers themselves. Through this dashboard, researchers and students may increase public exposure for their projects, encouraging access to multidisciplinary research to indulge in. Data can be monitored and downloaded through this dashboard, providing real-time credible data supplied by credible source within the education institution itself.

Design



The dashboard supplies information of research in form of channels. In the developed dashboard, UMP researchers may register to the website with the UMP id. General description of the channel will be described by the researcher himself.

The channels will form a list, where public visitors can search the relevant channels for their references. Visitors will be able to vote for likes and favourites to describe how important the data provided impact their activities. Through this voting method, the source UMP researchers will understand the significant of the data provided to the public.

Once the visitor accesses the channel, the visitors may observe any graph visualised by the researcher. The researcher needs to include the API key provided by the dashboard system inside the IoT device as publish target. Once the connection has been established, the data will be transmitted to the dashboard and displayed according

to the graphs generated based on the researcher settings. Through this dashboard. The visitors may copy the figures and they are allowed to download the raw data provided by the researcher.