A POP-UP VISUAL AND INTERACTIVE DATA ACQUISITION SYSTEM

College Central

PROJECT OBJECTIVES

This project aims to design and develop a data acquisition system, equipped with visual and interactive aids, to facilitate learners in acquiring the fundamentals of data acquisition.

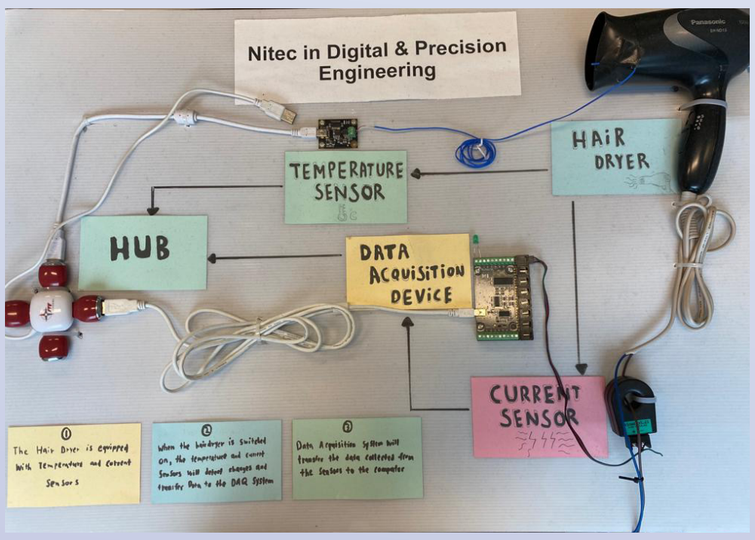
PROJECT SUMMARY

Climate change impacts electricity markets through an increase in energy demand and supply. For example, global warming inadvertently leads to increased usage of electrical energy for cooling purposes, in both residential homes and commercial buildings. The use of digitalisation tools is also increasing, thereby requiring more electricity to support high traffic computing power and data warehouses.

Hence, there is a need for novel designs in energy-efficient, energy-harnessing systems and regimes (e.g. smart grids). The designs of such systems would also require fundamental knowledge in data acquisition and visualisation modules.

This project focuses on the design of a visual and interactive data acquisition system, in the form of a pop-up poster, to help people understand the basics of data collection. Data is collected using sensor hardware and compatible software, with data fluctuations displayed on graphical user interfaces. Take the hair dryer as a common household appliance: The system would show how variations in temperature and power affect electricity consumption.

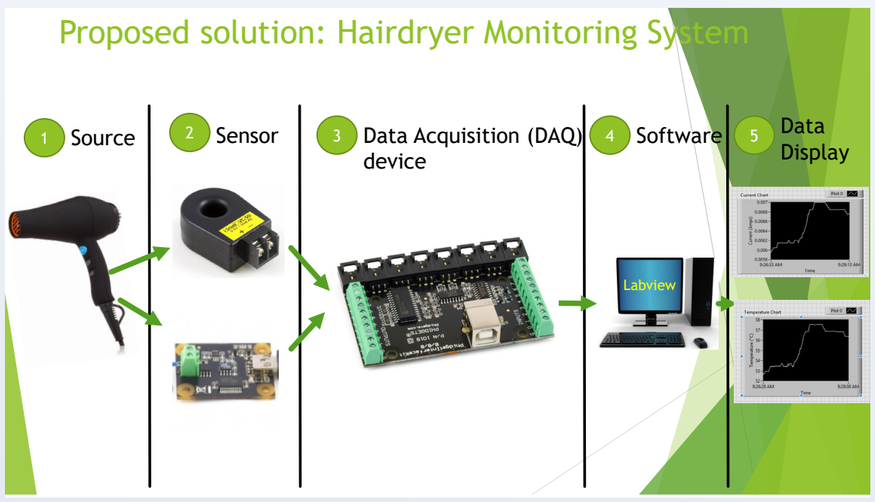
NITEC IN DIGITAL & PRECISION ENGINEERING



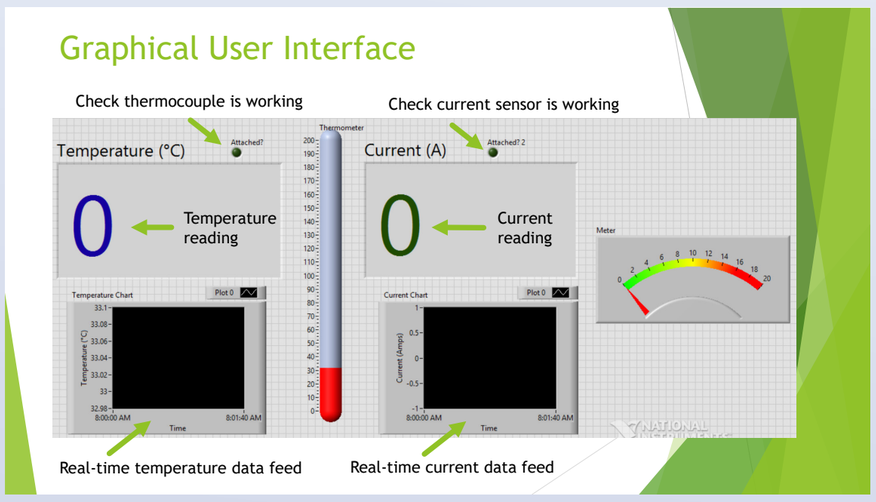
PROJECT OUTCOMES

- To create awareness on energy usage.
- To serve as an aid for the general public, especially young learners, to acquire the basics of data acquisition and visualisation.
- To provide a pedagogical tool for technical educators and teaching modules related to data, sensors and visualisation tools.

HAIRDRYER MONITORING SYSTEM



GRAPHICAL USER INTERFACE



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