

Safe Data Acquisition System

Status:	Filled
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Sponsor(s):	Self-funded project
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Project Description

Students have lately been deprived of the opportunity to participate in physical labs due to the pandemic. This project is aimed at designing a low-cost data acquisition system capable of safely interfacing a multitude of sensors and actuators in a lab or home setting and can be used in multiple university-level courses. In addition to the hardware, firmware, and PC interface software (e.g. MATLAB/Simulink) will be developed.

ould be able to output the following through

ontrol source (DC motor drive), and
orque sensing).

7. Digital output features: the system should be able to output the following through safety protecting circuits.

- i. Pulse Width Modulated (PWM).
- ii. Common Digital inputs UART, I2C, SPI.

Deliverables:

- Fully functional prototype
- Design documentation
- Source code
- User manuals