

## Real Time Data Acquisition & Control System Using Image Processing

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*Abstract*— Data acquisition involves gathering signals from measurement sources and digitizing the signals for storage, analysis, and presentation on a PC. Data acquisition systems come in many different PC technology forms to offer flexibility when choosing your system. You can choose from PCI, PXI, PCI Express, PXI Express, PCMCIA, USB, wireless, and Ethernet data acquisition for test, measurement, and automation applications. We propose a revolutionary approach in data acquisition, in which physical data is acquired using image processing using real time vision capture and analysis. Conventional data acquisition systems rely on connecting transducers to signal processing hardware, and in turn signal processing hardware reads the sensor, formats the data and sends to PC for logging, our proposed system eliminates costly data acquisition cards and signal processing circuitry, by capturing real time video and analysing physical data out of it using image processing.

*Keywords*—DAQ, Image Processing, MATLAB, Median Filter, Sensor.