Team number: S19-49

Title: ESP32 Based WiFi Data Acquisition Card

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Abstract:

With the recent expansion in smart home devices it can be difficult to control these devices all from one medium. Most products come from different manufactures which can be a hassle when trying to operate them together. Our solution is to come up with a singular hub that can do all of this from one source. The ESP32 is a powerful WiFi capable chip that can be coded with arduino software, making it easy to program. The ESP32 chip will be paired with electrically isolated inputs and outputs, to ensure that the ESP32 is protected from relatively higher voltages and currents. A custom PCB will house the ESP32, isolated I/O, power supply, and a WPS button for easier Wifi connectivity. Using Amazon Web Services (AWS), the ESP32 will be able to store and send data from the cloud allowing the user to control the ESP32 remotely.