Abstract:
When collecting data, it is not always practical to have the sensors physically connected to a single point. In these cases, a wireless option can be useful. This project examines the practical aspects of creating and programming a wireless sensing network. Further, at the data collection point, methods for collating and displaying the collected data are explored. In this project, a wireless sensing network is created using the PIC24 microcontroller as the remote nodes and a Raspberry Pi base station. Wireless networking is accomplished using the Nordic Semiconductor nRF24L01+ radio module. At the data collection point, the matplotlib Python library is used to create a time series graph of the data sensed by the network. The latest graph image is displayed on a web page.