Challenge #2: Collecting, Saving, and Visualizing Data from the Physical World

Your Task: create a system that will save data collected from a network of sensors and will allow visualization of data in both historical and real time views. Data should be hosted two ways: (a) on the localhost (laptop) and (b) on the pi.

Deliverables:

1. Presentation based on template and required items
2. Data in engineering units
3. Demonstration of solution
4. Graphics and/or video posted to piazza

Learning objectives: learn relevant data structures required for capturing data to satisfy reporting and analysis functions; data schemata, and visualization tools. Bring up the pi as an alternative to a laptop web server that serves as an example of an edge server.

Relevant Topics included

1. Data modeling
2. Database concepts
3. Interpolation in time and space
4. Data aggregation
5. Data visualization
6. Real time data streaming