NC 812/ESD 812: Internet of Things

Lab 3

Sensor Data Statistics

Due: February 17, 2017

This objective of this lab is to work on available sensor data and determine the statistical correlation measure of the same.

Refer to the link provided in the reference section. It provides information on a sensor testbed deployment and data collection from various environmental sensors. Understand the sensor placement in the floor plan, the types and data reading frequency. Download the data file and understand the schema.

For sensor1, save the temperature, relative humidity and light data. Please note the epoch numbers. Complete the missing data by using averaging or any other prediction

Compute the autocorrelation for the temperature data. What do you observe?

Determine the correlation coefficient between temperature-light, temperature-relative humidity and relative humidity-light data.

Determine the correlation coefficient between temperature data for sensor 1 and temperature data for sensor 6.

Determine the correlation coefficient between temperature data for sensor 1 and temperature data for sensor 50.

Note your observations.

References:
http://db.csail.mit.edu/labdata/labdata.html