SIT123: Data Capture Technologies

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# Lab Report Week 6: Data Visualization

In this task, we will design and develop visualizations for sensor data.

## 

## Pre-requisites: You must do the following before this task

1. **Attend Class (Lecture)**
2. **What following resources and videos on introduction to Tableau and how to build basic visualizations** (you might need to provide your details to be able to watch the videos)

<https://www.tableau.com/learn/tutorials/on-demand/tableau-interface>

<https://onlinehelp.tableau.com/current/guides/get-started-tutorial/en-us/get-started-tutorial-connect.html>

<https://www.tableau.com/learn/tutorials/on-demand/getting-started>

[https://www.analyticsvidhya.com/blog/2017/07/data-visualization-made-easy/](https://www.analyticsvidhya.com/blog/2017/07/data-visualisation-made-easy/)

1. **Read this sheet from top to bottom**

## Task Objective

**This is an individual task.** You will need to design and develop a visualization for the sensor data shared here:

<https://drive.google.com/file/d/1ResskTdqMN2Md770ICK99ehIWURBSsgz/view?usp=sharing>

<https://drive.google.com/file/d/1m8uRS9a7UOJrQn2mfCD_XYbF5AJo6JZH/view?usp=sharing>

## Software Required

* Tableau - Available in the lab

## Task Submission Details

Answer the following questions in this word document itself and submit to unit site.

### **Q1. What data types can you identify in the two data sets given? Use the information provided in the lecture, and identify the data types available in your datasets.**

**Temperature Dataset:**

* Ordinal (millis)
* Nominal (stamp)
* Quantitative (datetime)
* Ratio (temp)

**Humidity Dataset:**

* Ordinal (millis)
* Nominal (stamp)
* Quantitative (datetime)
* Ratio (hum)

### **Q2. Select one of the two data sets. Using your understanding of the given data, identify which visual variables are suitable to be used with your selected data set. Provide details of the visual variables and your justification here.**

**Using the temperature dataset:**

The visual variables should be the milliseconds and the temperature so that we can visualise the changes in temperature over time.

### **Q3. Design a visualization in Tableau to visualise one of the given data sets. Your visualization does not necessarily need to include all the visual variables you have listed in Q2. It should however be easy to understand, and have a clear message. Provide a screenshot of your visualization here.**

