# SIT123 Online Seminar

## Data Preparation with Tableau

Week 7

# Before we start…

**CHECKPOINT**: Have you started working on your project?

- Many students have emailed me about their project ideas and received feedback.
- **If you have not done so yet, please contact me or your tutor ASAP and let me know what you plan to do.**

# Before we start…

Remember …

- the Project is worth 30% of your marks
- The due date is coming soon! 16 Sep 9 am
- No extensions unless there are circumstances beyond your control

# Before we start…

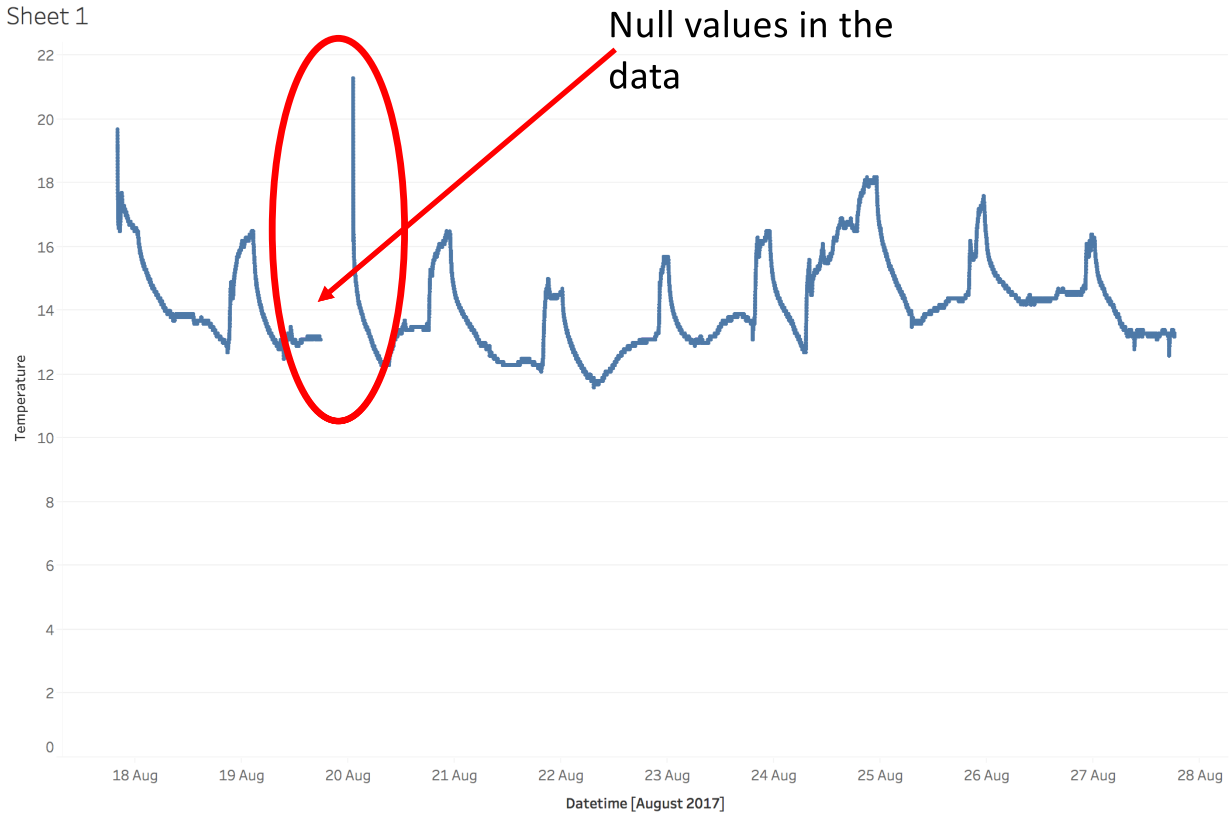
Remember …

- You need to set up your Arduino + Sensors (or other hardware)
- get the data collection code working
- collect data for at least 3 days
- clean the data
- do your analysis, visualization … AND
- Create the poster!

-> These will take you at least 2-3 weeks to complete. So you need to start NOW!

# OK … back to Tableau ☺

# When you have NULL or empty values

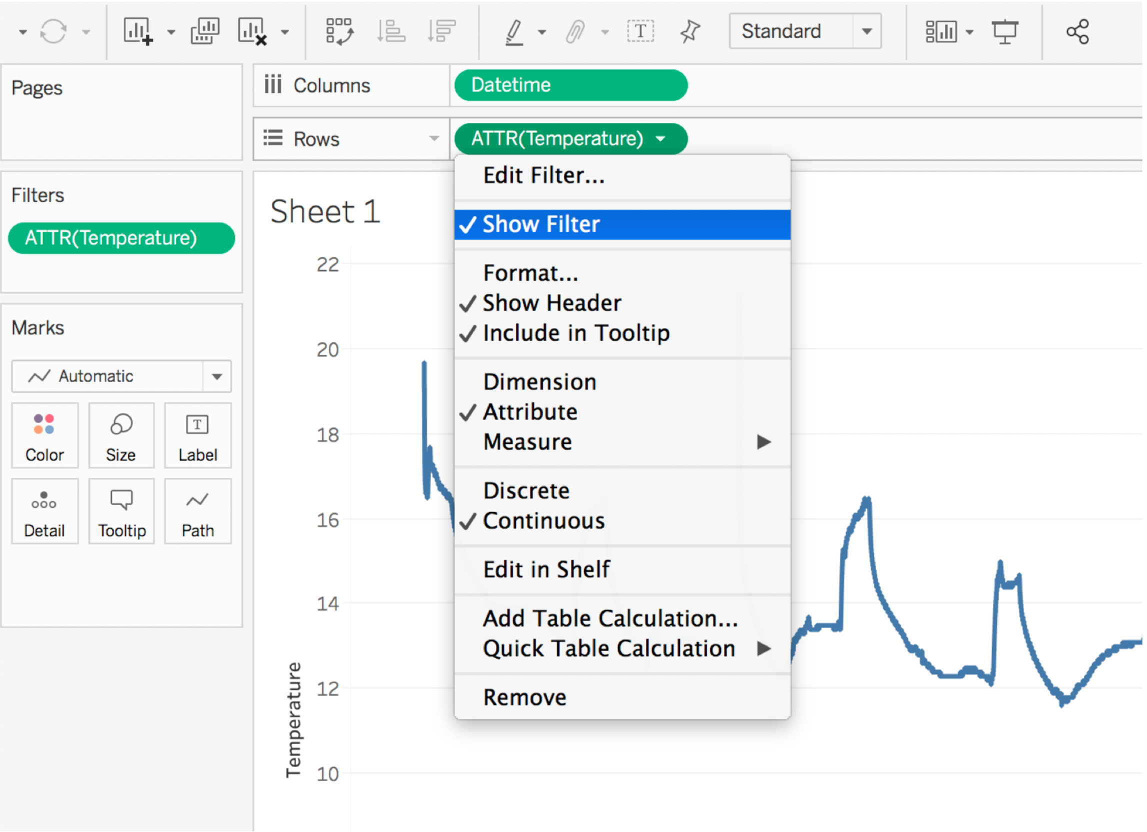


Null values in the data

The trend of Temperature as an attribute for Datetime. The view is filtered on Temperature as an attribute, which keeps all values.

# How to clean using Tableau?

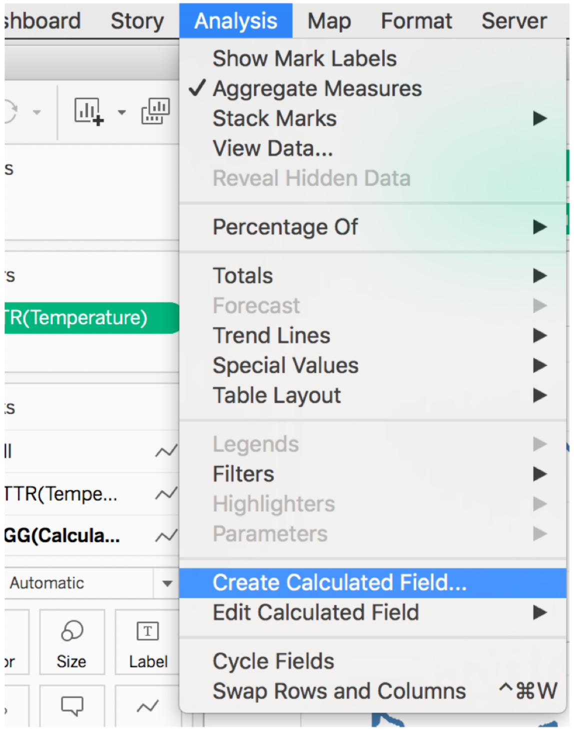
- Use the filter


Standard
Pages
Columns
Datetime
Rows
ATTR(Temperature)
Filters
ATTR(Temperature)
Marks
Automatic
Color
Size
Label
Detail
Tooltip
Path
Sheet 1
Temperature
22
20
18
16
14
12
10
Edit Filter...
✓ Show Filter
Format...
✓ Show Header
✓ Include in Tooltip
Dimension
✓ Attribute
Measure
Discrete
✓ Continuous
Edit in Shelf
Add Table Calculation...
Quick Table Calculation
Remove

# Replacing Null values with default values

https://www.youtube.com/watch?v=KSIVZrQmCF4&t=117s

Use ‘calculated fields’


shboard
Story
Analysis
Map
Format
Server
Show Mark Labels
✓ Aggregate Measures
Stack Marks
View Data...
Reveal Hidden Data
Percentage Of
Totals
Forecast
Trend Lines
Special Values
Table Layout
Legends
Filters
Highlighters
Parameters
Create Calculated Field...
Edit Calculated Field
Cycle Fields
Swap Rows and Columns ^⌘W
R(Temperature)
TTR(Tempe...
GG(Calcula...
Automatic
Size
Label

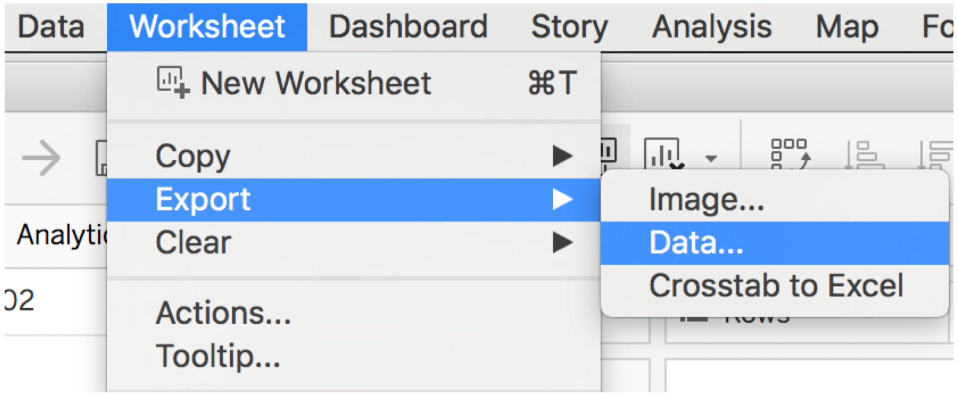
# Replace NULL with a a number

zn(ATTR([Temperature]))//replaces NULL with 0

IFNULL(ATTR([Temperature]),0)

IFNULL(ATTR([Temperature]),5) //replaces NULL with 5

# Export filtered data


Data
Worksheet
Dashboard
Story
Analysis
Map
Fo
New Worksheet ⌘T
Copy ▶
Export ▶
Clear ▶
Actions...
Tooltip...
Image...
Data...
Crosstab to Excel
Analyti
02

- Save in a new .csv file

# Source data

https://drive.google.com/open?id=0B-xsQS6xee_bR0xneUpIZVBzbWc

- More thank one week worth of light, temperature, humidity, motion data with timestamps.
- You can download and try to see how to remove the NULL values
- Can you see any trends?
- What insights can you gain?