SIT220/731 2023.T1: Task 7C

Tableau and *PowerBI* Dashboards

Last updated: 2023-04-04

Contents

1 Introduction

> Tasks 5–8 are not obligatory; you can submit them in any order (or decide not to tackle them whatsoever). C/D/HD is merely a subjective estimate of their difficulty level. Recall that for each task that you complete, you score 10 points (and for those that are not 100% correct, no points will be given).

This task is related to Module 5 (see the *Learning Resources* on the unit site). In case of any problems/questions, do hot hesitate to attend our on-campus/online classes.

It is due on **Week 11 (Friday)**. Start tackling this task as early as possible. If we find your first solution incomplete or otherwise incorrect, you will still be able to amend it based on the generous feedback we will give you (allow 3–5 working days). In case of any problems/questions, do hot hesitate to attend our on-campus/online classes or use the Discussion Board on the unit site.

Submitting after the aforementioned due date might incur a late penalty. The **cut-off date is Week 12 (Friday)**. There will be **no extensions** and no solutions will be accepted thereafter. At that time, if your submission is not 100% complete, it will be marked as FAIL, without the possibility of correcting and resubmitting. To ensure a fair environment for all, we are always very strict about deadlines.

2 Task

Your aim is to create two data visualisation **dashboards** that can be viewed by the marking tutors through a web browser: one using *Tableau Public* and one using *Power BI*.

> Make sure that each dashboard includes your name, student ID, and student group.

Reproduce the analysis that you have performed when solving task 4P, i.e., of the `nycflights13_weather.csv.gz` (manually decompress the file first) dataset, which gives the hourly

meteorological data for three airports in New York: LGA, JFK, and EWR for the whole year of 2013.

This includes:

1. Converting all columns so that they use metric (International System of Units, SI) or derived units (replace old or add new columns).

   > All data transformations **must** be done using *PowerBI* and *Tableau*! **Do not pre-process the datasets** in *pandas*.

2. Computing daily total precipitation for the `LGA` airport.
3. Presenting the daily total precipitation on a plot (a line graph or a scatterplot, whatever is more readable).
4. Identify the 10 wettest days. Present them in a table (dates and the corresponding total precipitation).

3 Additional Tasks for Postgraduate (SIT731) Students (*)

Similarly as in Task 4P, additionally visualise the humidity at the three airports (on a single plot).

4 Artefacts

You should submit a single PDF document (you can create it in any program, including Jupyter).

At the start of the document, you need to provide: the task **title** (e.g., *Task 42: How Much I Love This Unit*), your **name**, **student number**, **email address**, and whether you are an **undergraduate (SIT220) or postgraduate (SIT731)** adept.

Please provide the **URLs** and *clickable* **links** to your dashboards. Make sure they can be accessed publicly, without requesting any special permissions.

Then, include a few **screenshots** of your dashboards.

5 Intended Learning Outcomes

ULO	Is Related?
ULO1 (Data Processing/Wrangling)	YES
ULO2 (Data Discovery/Extraction)	YES
ULO3 (Requirement Analysis/Data Sources)	YES
ULO4 (Exploratory Data Analysis)	YES
ULO5 (Data Privacy and Ethics)	