SIG731 2023: Task 5C

Tableau and *PowerBI* Dashboards

Last updated: 2023-11-24

Contents

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

1 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 mean wind speeds for the `LGA` airport.
3. Presenting the daily mean wind speeds at `LGA` on a plot (a line graph, whatever is more readable).
4. Identify the 10 windiest days at `LGA`. Present them in a table (dates and the corresponding total precipitation).
5. Visualise the monthly mean wind speeds at the three airports (on a single plot).

2 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 post-graduate (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 3–5 **screenshots** of each of the dashboards.