Data Science in Power BI – Course Iterations:

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# 2022 – 2023 Academic Year Iteration Suggestions:

* Add small manual descriptive statistics calculations
  + E.g. calculate & interpret mean, what does the mean say about?
    - Condition A, B, C etc.
* Create a video explainer for the references section
* More interesting examples for Kick-off
  + Documentary Series: The Joy of ...
    - Stats
    - Data
    - Math
    - Etc.
* Datalab 04 needs to be more substantiative
  + Guide rails to choose an analysis
* Variables Datalab page: simplify the variables Datalab preparation
  + <https://adsai.buas.nl/Study%20Content/DataScience/IntroToVariablesAndDataTransformation.html>
  + More material on the Hierarchie of Power BI
    - [How to create and use a Power BI Hierarchy](https://www.youtube.com/watch?v=x6vXVJZ_eTY&feature=share&si=ELPmzJkDCLju2KnD5oyZMQ)
    - [Cleaning and transforming data](https://learn.microsoft.com/en-us/training/modules/clean-data-power-bi/) (just the first 5 modules)
    - Problem this year: Last Datalab we noticed that there were multiple people struggling with creating the data visualisations they wanted; e.g. filtering by year, country or multiple conditions, because they were struggling with the hierarchy or creating relational databases.
* Consider adding more interactive group excercises
* Rework the Power BI student template and create a video explainer to add to github classrooms
* Add examples of good SDG Dashboards to GitHub
  + Student examples when they’re there
    - Alternative: add extra excercises to fill in a pre-made dashboard step-by-step? One we made
  + Other dashboards
    - <https://www.sdgsdashboard.org/home> - Very nice and extensive dashboard; might inspire you to find ways to visualise your variables. Note that the SDG goals are actually already phrased as (very global) problem statements so this dashboard tries to address all the SDG goals; where you are addressing only 1 so make sure to select your SDG indicators correctly!
    - <https://sdgindiaindex.niti.gov.in/#/> - India’s performance quantified. Like the previous dashboard it also address all SDG goal so you have to make a selection. This dashboard is a nice example for if you are investigating regions within a country (e.g. India) or continent (e.g. Africa).
    - <https://www.universiteitenvannederland.nl/nl_NL/sdg-dashboard.html> - An example of a Power BI dashboard for a specific goal: How does a institution perform on the SDG; and specifically in relation to a specific variable: scientific contribution quantified in various form: specifically the amount of publications.
    - <https://www.sdgindex.org/> - here’s a page which contains a variety of different dashboards made for a variety of topics such as different countries or world regions.
    - <https://data.unwomen.org/data-portal/sdg> - A nice interactive dashboard on Gender statistics; specifically trying to combat the inequalities faced by women.
* Add instructions to Datalab 00: introduction on how to commit to Github:
  + MS teams post of this year: I've been repeatedly asked about uploading your dashboard to github: you can simple save and upload your dashboard to github every time you make change (in other words: every time you have a new version) without changing the name (e.g. for every new version: V2, V3 etc.). You are free ofcourse to maintain multiple versions (e.g. draft, final etc.). Ultimately, you should make sure to evidence the right file(s) in your learning log though, that's the most important thing because that's the file we'll look at for grading!
* <https://adsai.buas.nl/Study%20Content/DataScience/Analysing%20Relationships%20between%20Variables.html>
  + Add subexcercise to interpret the strength of the correlation
* Maybe make using the questionnaire a more routine approach to assess project components more structurally and make students more at home with the ILO’s?
  + Or make them assess the work of previous students
    - Different performances and see if their judgement matches the actual received grade of the stuent examples
* More relational database material would be valuable
* Define UX criteria more clearly:
  + Intuitive means that you can understand the dashboard without further explanation. Presenting your data and graphs without Preferably without text boxes, they should preferably be used to deepen your understanding instead of being required to understand the graph/data.
* Consider having a multiple sources of educational material
* Go into correlation coefficient more deeply, get more clear understanding
  + Remove it from the Datalab preparation
* Assessment Criteria: Sufficient Condition for both overlaps and should be more clear
  + 4.1 Poor: measures of central tendency OR measures of spread.
* 4.1.Insuf1 - The student is able to represent data using appropriate data visualisations.
  + Define appropriate more clearly: conditions to use boxplot/histogram etc.
* Calculation excercises need more explanations; expecially specifying the symbols and terms in the equations and what they mean
* Sigma calculation put in again
* Group students together who work on the same SDG indicators; sessions where students work together on their SDG indicator separate of their mentor group
* Consider replacing the datacamp courses with other materials; especially less courses on datacamp later on and connect it with excercises which mirror the dashboard deliverables