



Dalberg
Data
Insights

Technical Data Fellowship
Case Study Assessment
2025/26

Introduction

This case study is designed to evaluate your ability to solve analytical problems by applying quantitative methods, demonstrating strong data intuition and effectively communicating insights. As a Technical Data Fellow at Dalberg Data Insights, you will be expected to analyze complex datasets, identify meaningful indicators and develop actionable recommendations that drive impact in development contexts.

As you approach this task, you should focus on delivering insights that are both impactful and easy to understand for stakeholders with varying levels of technical expertise. You have the freedom to choose your preferred technology stack (e.g. JavaScript, R, Python etc.) based on your expertise and requirements of the project.

General guidelines

- **Complete the case study assignment** given on the next page.
- You have **72 hours** to complete the task from the moment that you download these instructions, but it will likely take you less time than that. Do not leave it to the last minute to submit your solution.
- **We do not accept late submissions** without prior communication. In case of unforeseen challenges that make you unable to complete the case study, please contact ddi.careers@dalberg.com as early as possible and before the deadline has passed. We will grant extensions on a case-by-case basis for exceptional circumstances.
- To ensure unbiased and anonymous scoring, please **do not mention your name** in any of the file names or bodies.
- You may not disclose any part of the assignment or your solution with any other person. Violations of this policy will lead to disqualification of your current and future applications.
- The use of Generative AI models (e.g., ChatGPT) is allowed as long as it does not compromise the quality of your work.
- Assume that all information is given in the task, however, should there be any clarifying questions, please email ddi.careers@dalberg.com and put dennis.mwika@dalberg.com in CC.

Submission guidelines

Once you have completed the assignment, we would like to ask you to submit the following two outputs using the link that was sent to you in our initial email. **Do not email us your results.**

Insights

- Your output should be a presentation deck with **a maximum of 6 slides** and may well be shorter than that. A cover page does not count towards the slide limit.
- The presentation should speak for itself, i.e., you will not be asked to present or record yourself presenting it.
- You can use any presentation tool to draft your output, e.g., Microsoft PowerPoint, Google Slides. Please do not develop a dashboard (e.g., Tableau, PowerBI).
- Please export and upload your final output **as a PDF file**.

Code

- We also expect you to submit all code that you wrote for this case study alongside your insight analysis.
- After uploading the insights (i.e., presentation slides) on the submission's portal, you will be asked to upload your code **as one single file**.
- This file can be any file type (e.g., .py, .ipynb, .R, .js) or be a zipped folder if you wrote multiple files (i.e., .zip). **Do not upload any datasets.**

Enhancing Healthcare Accessibility in Nairobi, Kenya

Context

The Nairobi County Health Officer has engaged Dalberg Data Insights (DDI) to help address disparities in access to quality healthcare across the county. The office has secured an external grant to improve health infrastructure and resource allocation, but they require data-driven insights to prioritize investments effectively.

The Health Officer's key goal is to ensure equitable access to healthcare for all residents in Nairobi, in alignment with Sustainable Development Goal (SDG) 3 which aims to ensure healthy lives and promote well-being for all at all ages. To support this, Dalberg Data Insights (DDI) has been tasked with analyzing existing datasets to localize the most significant gaps in the current healthcare infrastructure, with a focus on primary healthcare services, and propose actionable recommendations for improvement.

Data Resource

To help you do analysis, the client has provided two datasets detailing the characteristics of health facilities in Nairobi and the Kenya Population and Housing Census, providing detailed demographic insights for Nairobi.

1. **Health Facilities Data:** Contains comprehensive information on health facilities across Nairobi including geo locations, services offered, infrastructure capacity among other indicators. While the health facilities dataset originates from various years, you can assume the data is still representative for the purposes of this analysis.
2. **Kenya Population and Housing Census data:** provides detailed demographic information for Nairobi from the 2019 census.

The datasets can be accessed using the links provided below.

[Health Facilities Dataset](#)

[Kenya Population and Housing Census](#)

Additional assumptions and datasets may be used where required to enrich the analysis and quality of recommendations.

Assignment:

Assume that you are a Data Scientist working at Dalberg Data Insights (DDI) who has been staffed on this project. Your role is to analyze and interpret the data to propose actionable recommendations for improving access to Quality Healthcare in Nairobi. Your findings will help the Nairobi County Health Officer prioritize investments and make the best use of the recently secured grant to address critical gaps in the healthcare system.

As part of your deliverable, prepare a six-slide presentation (excluding the cover page) for the client, highlighting your initial hypothesis on where the investments should be directed. Your hypothesis should be supported by evidence, including clear and compelling visualizations derived from the data given to you. Please explicitly state all assumptions made.

*Please note that this case study scenario is entirely fictional and was constructed for the purpose of this assignment. DDI has not worked with the Nairobi County Health Officer in any past engagement.

Assessment Criteria:

1. Data understanding, processing accuracy, and contextual awareness.
2. Code quality based on readability, modularity, consistency, and documentation.
3. Clarity and depth of analysis in mapping health facilities, evaluating accessibility and assessing demographic disparities.
4. Thoughtfulness in identifying vulnerabilities and proposing targeted recommendations.
5. Alignment of recommendations with SDGs and practicality in implementation.
6. Creativity in data insights and metric development.
7. Clearly document and justify any assumptions made during the analysis.
8. Professional and well-structured presentation that is logically organized making it understandable for a non-technical audience.