

Unlocking Data-Driven Solutions for Healthcare Accessibility



The Datathon is an exciting opportunity to develop and test your data skills in a competitive yet collaborative environment. By analyzing real-world datasets, you'll have the chance to generate innovative solutions that can make a tangible impact on healthcare accessibility in Nairobi, Kenya, aligning with the Sustainable Development Goal (SDG) 3 for Universal Health Coverage.



Why Participate in a Datathon?

1 Develop Data Skills

Datathons provide a unique platform to hone your data analysis, problem-solving, and communication skills in a hands-on, real-world setting.

2 Collaborative Learning

Collaborating with other passionate data enthusiasts allows you to learn from diverse perspectives and gain valuable insights from your peers.

3 Innovative Solutions

By tackling complex, data-driven challenges, you'll have the opportunity to develop creative and impactful solutions that can make a tangible difference.

4 Mentorship and Guidance

Interact with industry experts who can provide guidance, feedback, and mentorship to help you grow as a data professional.

Datathon Objectives and Data Sources

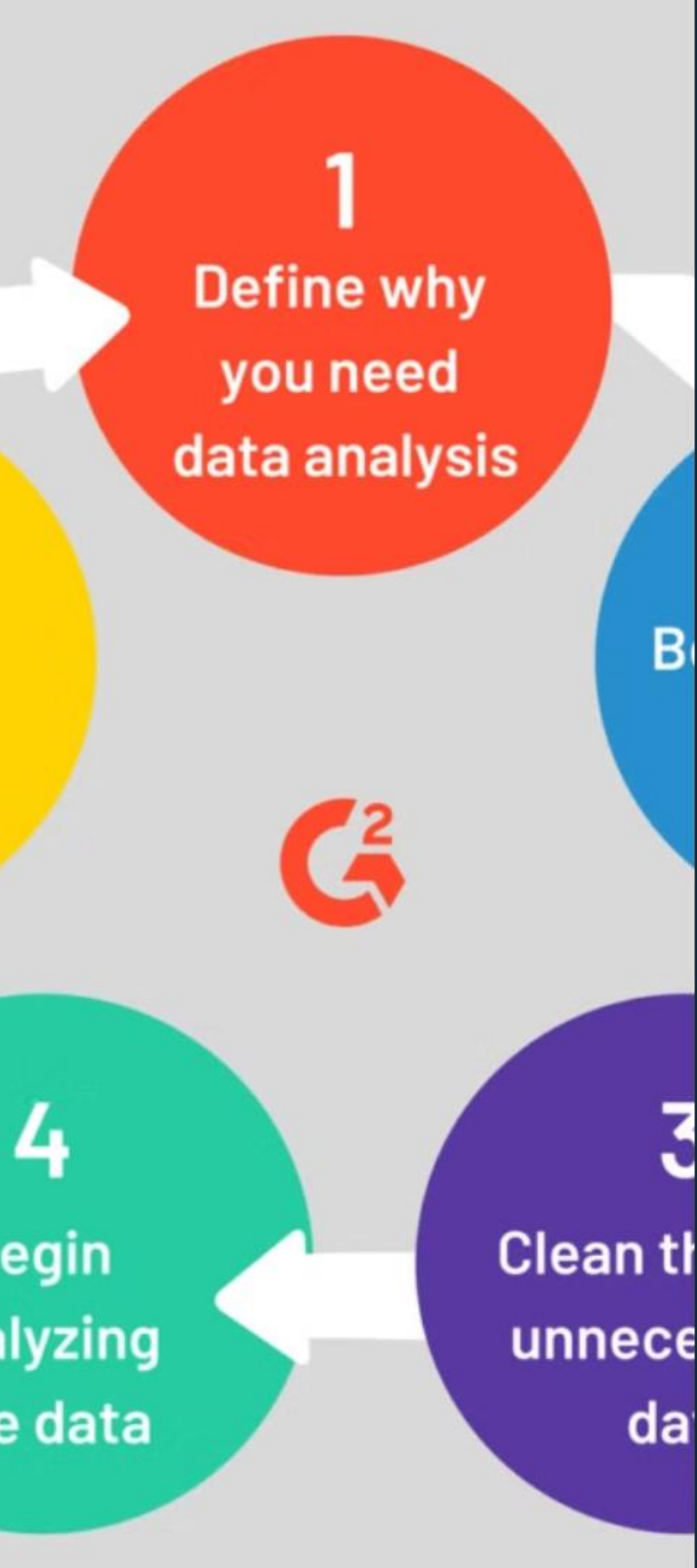
Objectives

The primary objective of this Datathon is to analyze provided datasets and generate actionable recommendations for enhancing healthcare accessibility in Nairobi, Kenya, aligning with SDG 3 for Universal Health Coverage.

Data Sources

The Datathon will utilize two key datasets:

- [Dataset 1: Health Facilities \(Nairobi\)](#) - Includes services offered and geo-locations.
- [Dataset 2: 2019 Kenya Population and Housing Census \(Nairobi\)](#) - Provides demographic details.



Datathon Analysis Steps

1

Data Cleaning & Preparation

Clean and format both datasets for consistency and usability, handling missing values and ensuring data anonymity.

2

Exploratory Data Analysis (EDA)

Analyze the distribution of health facilities, identify common services, and examine population demographics across Nairobi's geographical areas.

3

Spatial Analysis

Overlay population density data with health facility locations to identify underserved areas and potential gaps in service coverage.

Datathon Analysis Steps (Continued)

1

Demographic Analysis

Compare healthcare facility distribution with population demographics to identify disparities in access and correlations with socio-economic factors.

2

Hypothesis Testing

Formulate and validate hypotheses about the relationship between healthcare accessibility and various factors, using statistical tests.

3

Actionable Recommendations

Develop a set of data-driven, actionable recommendations to improve healthcare accessibility in Nairobi, aligning with the SDG 3 for Universal Health Coverage.



Key Research Questions

Geographic Accessibility

How is the distribution of healthcare facilities across Nairobi's different geographical zones? Are there areas with significantly lower access to healthcare facilities compared to their population density?

Service Availability

What are the most and least common healthcare services offered by facilities across Nairobi? Are there specific geographic areas lacking access to crucial services like maternity care or emergency care?

Demographic Disparities

How does healthcare facility distribution correlate with population demographics (age, income level, social groups) across Nairobi? Are there specific demographics facing greater challenges in accessing healthcare facilities?

Policy and Intervention Strategies

What strategic locations would be most suitable for expanding healthcare facilities to optimize service reach? Can mobile or telemedicine solutions play a role in improving access to healthcare services in geographically remote areas?

Deliverables and Expectations



Clear & Concise

Present your findings in a clear, concise, and visually appealing manner using effective data visualization techniques.



Data-Driven Insights

Showcase the key insights you've uncovered through your data analysis, ensuring they are well-supported by evidence from the datasets.



Actionable Recommendations

Develop a set of actionable recommendations that address the identified challenges and propose concrete steps to improve healthcare accessibility in Nairobi.



Alignment with SDGs

Frame your recommendations within the context of achieving SDG 3 (Universal Health Coverage), highlighting the broader societal impact of your solutions.



Embrace the Datathon Challenge

1

Develop Data Skills

Hone your data analysis, problem-solving, and communication abilities in a real-world, competitive environment.

2

Collaborate with Peers

Learn from diverse perspectives and gain valuable insights by working with other passionate data enthusiasts.

3

Generate Impact

Develop innovative, data-driven solutions that can make a tangible difference in improving healthcare accessibility in Nairobi.

Timelines

Submission of Notebooks: 1900 hrs. on 24TH May, 2024

Submission email: mainabrenda008@gmail.com

Presentation: 27TH May, 2024

Kindly work in groups of 5 peers max.