
LISUM 46 - Week 7 Deliverable (My Solo Project)

Project Title: *"Analyzing Post-Vaccination Reactions of Children in Kenya to Typhoid and Measles Vaccines"*

1. Personal Details

- **Group Name:** *Personal work*
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 - **Country:** Kenya
 - **College:** Kibabii University
 - **Specialization:** Data Science
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2. Problem Description

In 2025, Kenya initiated a mass vaccination campaign targeting children against **typhoid and measles**. While the effort aims to reduce preventable illnesses, **little data exists on how children react to the vaccines** post-administration. This project seeks to **collect, analyze, and interpret** data on children's physical responses to these vaccines, such as fever, swelling, rashes, or allergic reactions.

3. Business Understanding

- **Stakeholders:** Ministry of Health, Schools, Parents, Health NGOs
 - **Need:** Understand the most common vaccine reactions in children to improve care, communication, and readiness in future campaigns.
 - **Goal:** Use survey and observational data to map out patterns of vaccine side effects based on age, vaccine type, location, and gender.
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4. Project Lifecycle & Deadline

Phase	Description	Deadline
Planning & Design	Define goals, design forms for data collection	Week 2
Data Collection	Gather data from parents, schools, or health officers (mock/survey)	Week 3
Data Cleaning & Prep	Format and validate entries, remove inconsistencies	Week 4

Phase	Description	Deadline
Data Analysis	Identify trends (e.g., % with fever, rash per county)	Week 5
Visualization & Insights	Create graphs, charts and tables	Week 6
Report & Presentation	Summarize insights with public health recommendations	Week 7

5. Data Intake Report

- **Data Type:** Survey/Questionnaire (Mocked for privacy & scope)
- **Key Variables:**
 - Age group (e.g., 0–2, 3–5, 6–9)
 - Gender
 - Vaccine type (Typhoid, Measles)
 - Reaction type (Fever, Rash, Vomiting, None)
 - County/Region
 - Time taken to recover
- **Tools Used:** Google Forms, google colab ,Python (Pandas, Matplotlib)
- **Sample Data Collection Summary:**

Child ID	Age group	Vaccine	Reaction	county
001	3-5	measles	fever	Kisumu
002	0-2	typhoid	none	Nairobi
003	6-9	typhoid	diarrhea	Kakamega
004	6-9	measles	none	Mombasa
005	3-5	measles	rash	Nakuru

N/B:The above is just a mock sample that I've just given for demonstration purposes.