

# Exploring Healthcare facilities and its distribution in Ghana

Ghana health facilities dataset includes information about the different healthcare facilities spread across the country such as its name, type, ownership, location.

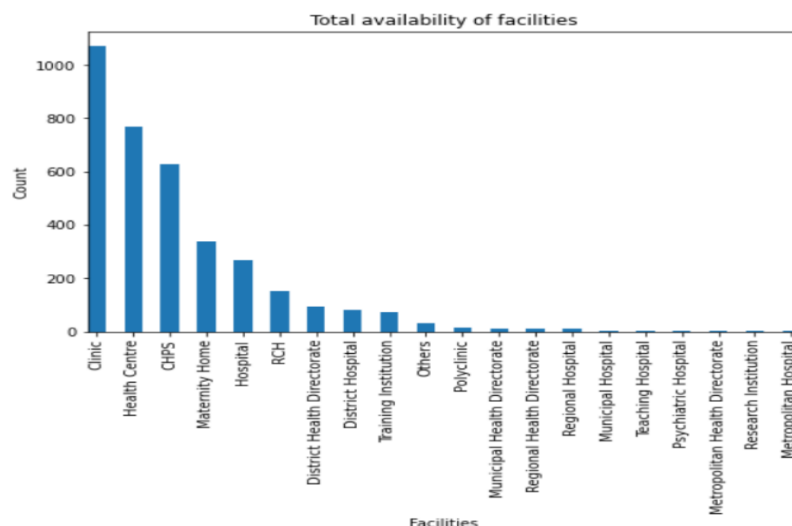
## DATA PRE-PROCESSING

The dataset initially contains about 3756 records with 8 columns. Dataset is checked for duplicate values, missing values and they are removed from the dataset. Further, the columns are inspected individually to refine any data or case mismatch. After the pre-processing is completed, the dataset contains 3559 rows for 8 columns.

## DATA ANALYSIS

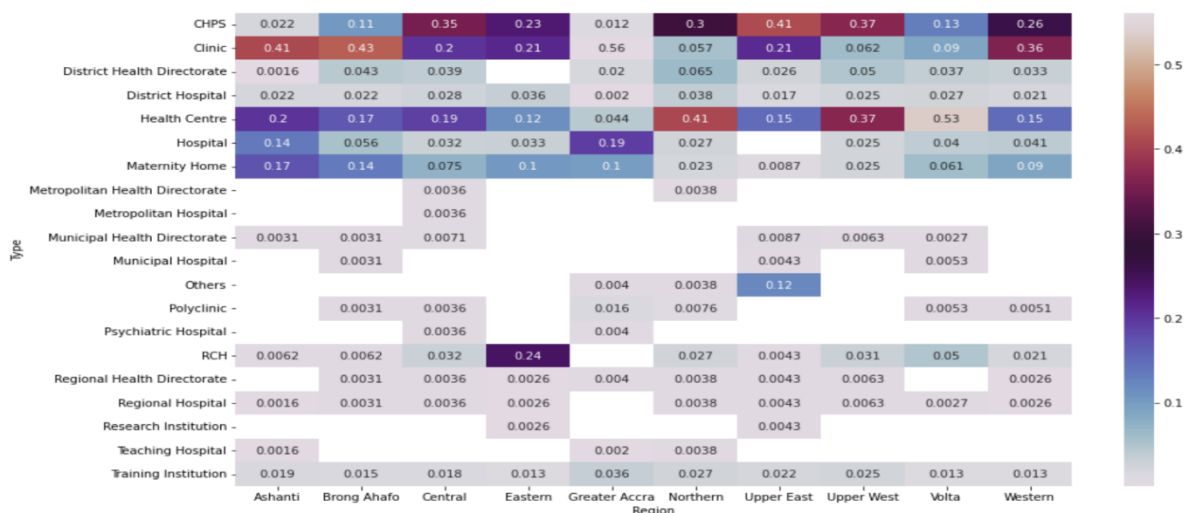
### Total number of all the different types of facilities available in Ghana

Of all the various facilities available in Ghana, the most popular one is the ‘Clinic’ with over a count of over 1000. ‘Health Centre’ comes right behind with just short of 800 centres. There are very few Metropolitan hospitals and psychiatric hospitals which can be a pressing concern.



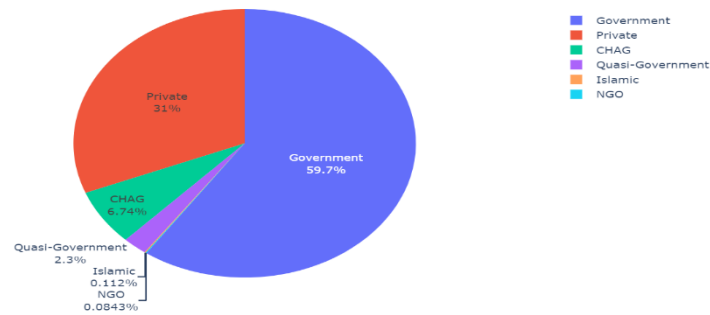
### Distribution of health facility types in each region

The dataset is normalized and transformed to produce a heatmap to observe the distribution of types of the facilities across each region. It is noticed that most of the regions like Upper East, Northern, have a large spread of Clinics and CHPS zones. The highest number of RCH units is present in the Eastern region which would make it an ideal region for pregnant women or new mothers. Health centres are distributed moderately across all the regions.



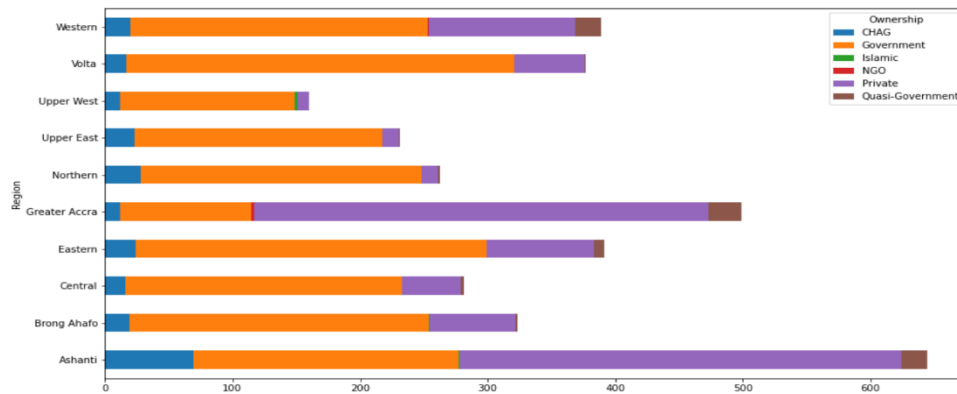
## Who owns the facilities?

The government owns the major 59.7% of all the healthcare facilities in Ghana which can benefit the residents financially. Another major chunk of 31% of the facilities is owned by Private sector. However, less than a percent of these facility institutions is owned by NGOs or Islamic organizations.



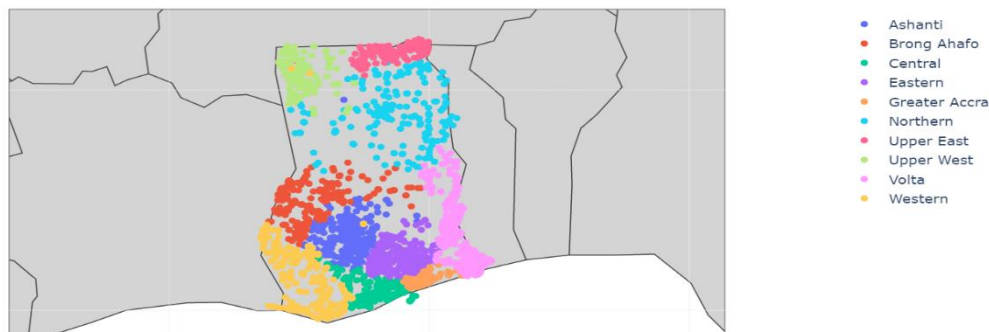
## Region-wise distribution of ownership

It is observed that in heavily populated regions like Ashanti and Greater Accra, Private sector dominates in providing the healthcare facilities. In other cases, it is the government that provides majority of the healthcare to the people. It can be derived from the graph that, Christian Health Association of Ghana (CHAG) owns a few healthcare facility units in all the regions of Ghana.



## Region-wise representation of the facility distribution in Ghana

The facilities are represented on the map of Ghana in order to analyse where they are located and their spread with the help of latitude and longitude values for each facility centre. It is evident that the healthcare facilities are concentrated near the borders of Ghana while they are sporadic in the middle. The coastal areas in the south are densely populated which explains the concentration of the health care facilities there.



## LIMITATIONS

This dataset is limited to the distribution and the ownership of healthcare facilities. Other features like measure of quality, funds received, working condition of the healthcare institutions, expenses in each healthcare unit would be useful to draw deeper insights to understand how these healthcare facilities differ from one another and what is best suited for a region or its people.