**NIGERIAN DOCTORS ON THE RUN:**

**EMERGING ISSUES IN THE HEALTHCARE SYSTEM**

**PROJECT METHODOLOGY**

1. **Project Overview:**

The issue of Nigerian doctors leaving the country for better opportunities has become a significant concern for the country's healthcare system. This study examines the various factors driving the migration of doctors and the potential negative consequences on the healthcare system. The study finds that poor remuneration, insecurity, and inadequate diagnostic facilities are the primary driving factors for doctors' emigration. The migration of doctors has worsened the already struggling healthcare system, affecting the quality of care provided to patients, especially in rural areas. The study recommends policy solutions such as an upward review of physician remuneration, analysis and prevention of insecurity, and increased funding for the healthcare sector to improve diagnostic infrastructure and retain healthcare professionals. The study highlights the urgent need to address the root causes of the issue and prevent the collapse of Nigeria's healthcare system.

1. **Tools:**

* QGIS
* RStudio
* Tableau
* Excel

1. **Process:**
2. **Step 1:** The project obtained and made use of the following data and shapefile;
3. The shapefile of Nigeria
4. Available Data on the statistics of doctors, health care professionals and health facilities was sourced from [Nigeria Federal Ministry of health website](https://hfr.health.gov.ng/facilities/hospitals-search?_token=B56eWLlwNWppq0M2sTQHKzwyaTM0WR1sP8A9YL9o&state_id=1&lga_id=1&ward_id=0&facility_level_id=0&ownership_id=0&operational_status_id=1&registration_status_id=0&license_status_id=0&geo_codes=0&service_type=0&service_category_id=0&facility_name=Damasak+General+Hospital&entries_per_page=20)
5. Phone interviews with know medical practitioners in Nigeria and Nigerians in the diaspora ( names withheld due to confidentiality agreement with the parties)
6. **Step 2**: I proceeded to do some data cleaning and exploration on both excel and QGIS. The shapefile was simplified and the attribute table was rid of unnecessary layers. I made use of QGIS in creating a count field using the calculate field option. This was done after establishing a join with the excel file containing the data of secondary hospitals.

Graphical user interface

Description automatically generated with medium confidenceGraphical user interface, application, table, Excel

Description automatically generatedTable

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1. **Step 3:** I switched to RStudio to generate the map of secondary hospitals . First, I made sure to load all necessary libraries, the shapefile of Nigeria secondary hospitals which I created in QGIS from the previous step and set the ncesaary geographic refrence system to UTM Zone 32N.

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* The boundaries of Nigeria were plotted and ColorBrewer was loaded. I did some renaming work using “dplyr” to rename some of the columns.

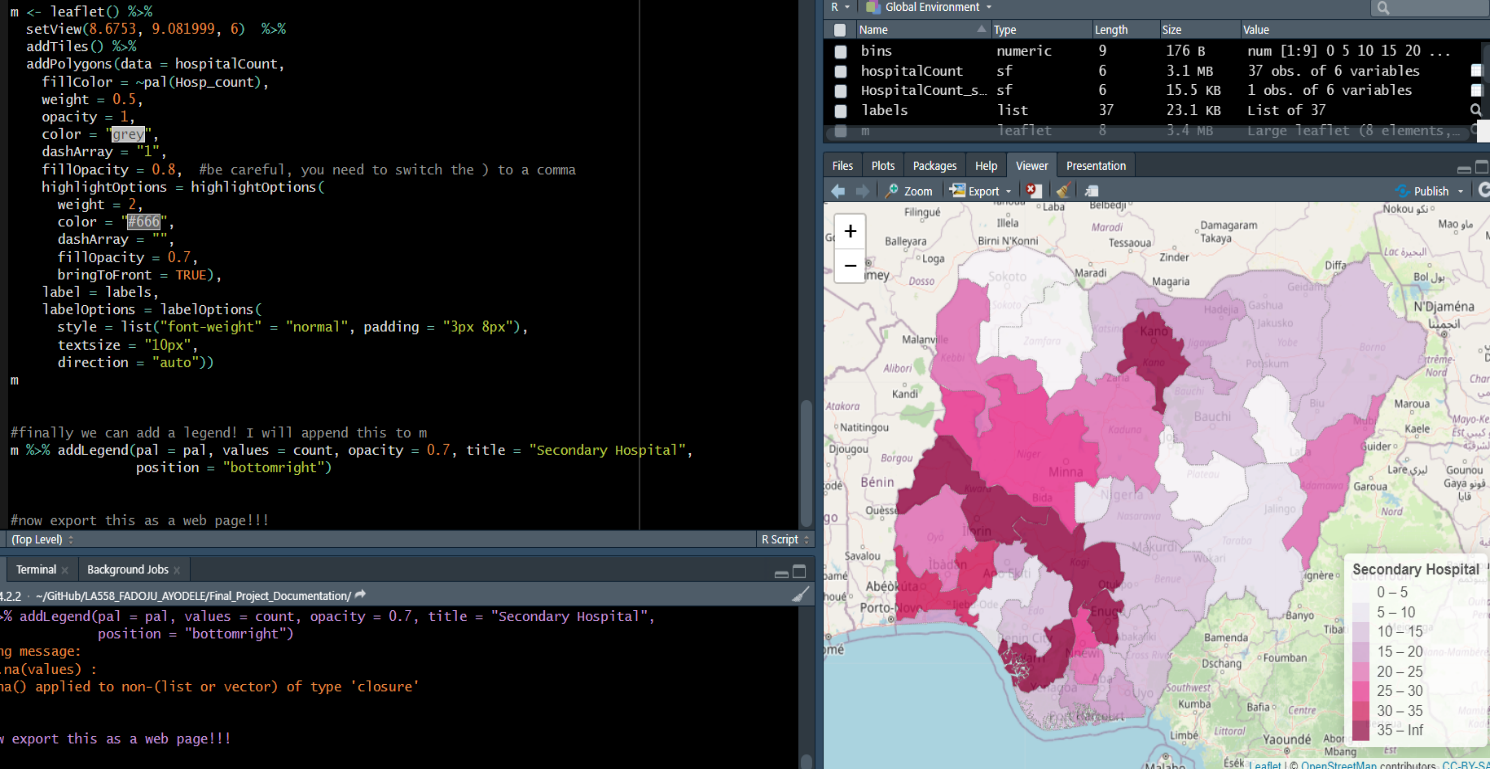
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* Using the code in the above screenshot , I plotted a choropleth map using the latitude and longitudes and added an interactive function for the map.



* I added a legend for the map as shown above and plotted the map.

1. **Step 4:**  In Tableau, I joined the tables to form multiple connections among my data. This becomes really important when carrying out filter operations on the map to make it quite interactive.

Graphical user interface, application

Description automatically generated

* I then made use of details, tooltip in the marks option to create a map. Followed by making states and geo-political zones a filter. I made sure to apply it to all sheets using the same datasource.

Map

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* Number of doctors, nurses, health professionals were used as details and tooltips.

Map

Description automatically generated

* I created a bar chart that shows specifically the most recent and available number of doctors practicing within Nigeria. I made use to of Filter to ensure that it is interactive with other maps.

Chart, bar chart

Description automatically generated

1. **Step 5:** I created dashboards to present visuals, text for the project. I started with a cover page showing the title and an image embedded with the link to the site it was sourced from.

Graphical user interface

Description automatically generated

* I went ahead to create other dashboards visuals with images and maps. In one of the visuals, i inserted my map created in RStudio into tableau using a link I obtained from my GitHub webpage.

Map

Description automatically generatedGraphical user interface, text, application, chat or text message

Description automatically generated

* One of the dashboards I created had the option of using a filter and is interactive with the map. I used both the chart and the map as a filter. Click the more options button on the map or chart and select use as a filter.

Graphical user interface

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* I used the story option to create a story for my various dashboards, I extracted and save it to tableau public to get link to share my work.

Graphical user interface

Description automatically generated

**THANKS!**

You can find my Code in RStudio [here](https://github.com/Fadojuaj/LA558_FADOJU_AYODELE/blob/Main/Final_Project_Documentation/Secondaryhospitals_leaflet.R) and my Tableau project [here](https://public.tableau.com/views/Doctors_Migration/Doctors_Migration?:language=en-US&:embed=y&:embed_code_version=3&:loadOrderID=0&:display_count=y&publish=yes&:origin=viz_share_link)

**Resources:**

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