Name: Christine Jann Baya
R Project & Shiny App: Dengue Cases in the Philippines
Stacked Bar Chart with Region and Year

Report

This project examines dengue cases across the Philippines from 2008 to 2016 using data from Mendeley, which tracks confirmed cases by year, month, and region. Dengue fever continues to pose a major public health challenge in the Philippines due to its seasonal outbreaks and regional variation. Public health authorities, local government units, healthcare planners, and researchers require timely and interpretable data to monitor trends and provide interventions. The use case for this project is to provide stakeholders with an interactive and accessible tool that enables them to explore dengue cases by year and region.

To prepare the data for analysis, I cleaned it by standardizing column names, converting months to numbers, trimming extra spaces from region names, and ensuring all case counts were properly formatted. I also removed any records with missing or unreliable information to keep the dataset consistent. Along the way, I ran into several common problems like inconsistent column names across the dataset, variables that were in the wrong format and needed converting, missing values, and package dependencies.

I chose a stacked bar chart as a key visualization because it effectively displays monthly dengue cases while simultaneously comparing multiple regions. It allows users to observe both overall trends and relative regional contributions within a single visualization. The ShinyApp I managed to build includes two interactive filters– Year and Region– that let users drill down into the data. By selecting a particular year and region, users can see exactly how cases fluctuate throughout the months, making it straightforward to identify seasonal spikes and geographical hotspots. My main aim is to create visual tools that reveal when and where dengue outbreaks occur, helping public health officials monitor the situation and make informed decisions. This approach gives stakeholders a practical way to track trends and focus their efforts where they're needed most.