Summary of Work:

1. Exploratory Data Analysis:
   * Conducted an exploratory analysis on the dataset.
   * Identified that most categorical variables had an even distribution of frequency occurrences.
   * Instructed the team to create visualizations to prove the even distribution.
   * Discovered an uneven distribution in the billing amount, leading to a focus on the financial direction.
2. Data Visualization Contributions:
   * Contributed two graphs to the final report: a. Mosaic Plot:
     + Visualized the distribution of patients admitted over the years.
     + Concluded that each patient admitted was almost equally distributed for each medical condition among the years, based on the mosaic plot. b. Calendar Heatmap:
     + Analyzed the amount of patients across each date, week, and month over the years (2019-2023).
     + Went through several drafts, experimenting with color scales.
     + Chose a sequential color palette from white to black for better interpretation.
     + Gained insights into seasonal and weekly trends, as well as periods of patient overload.
3. Coding and Implementation:
   * Used R Studio to code both the mosaic plot and calendar heatmap.
   * Sourced the calendar heatmap from GitHub and made modifications to accommodate the years 2019-2023, including color scheme, monthly, and weekly rubrics.
4. Report Writing and Project Management:
   * Contributed to the final report by writing the following sections:
     + Introduction and data explanation
     + Exploratory analysis
     + Creating and connecting the story
     + Analysis and discussion
   * Merged everyone's code and added it as an appendix to create a cohesive final report.
   * Collected all available visualizations and created milestone PDFs for submissions.

Summary of Takeaways:

1. Appreciation for Data Visualization:
   * Learned about the widespread usage of data visualizations across various domains and applications.
   * Developed a deeper understanding and appreciation for simple graphs, color usage, and visualization techniques for technical audiences.
2. Exposure to Visualization Techniques and Tools:
   * Gained knowledge about the numerous visualization techniques and different types of visualizations available.
   * Explored various tools like R Studio, Tableau, and Shiny for creating visualizations.
   * Experimented with unique and different visualizations like the calendar heatmap and mosaic plot in the project.
3. Future Plans and Goals:
   * Decided to work on more projects during the summer holidays and upload them to Tableau Public and Kaggle communities for practice and exposure.
   * Expressed a desire to select a clearer real-world dataset for future projects to derive meaningful research findings or takeaway information.