STAT 563 FINAL PROJECT

**360-Degrees Contribution Report**

Our team worked collaboratively to analyze factors influencing house prices in King County, USA, using Kaggle's dataset. Below is a detailed account of each team member’s contributions and our collective efforts to complete the project.

**Individual Contributions**

* **Richel Ohenewaa Attfuah**  
  As the lead for **data cleaning**, I ensured the dataset was prepared for analysis by handling missing values, removing inconsistencies, and structuring the data for modeling. I also conducted an extensive **exploratory data analysis (EDA)** to uncover patterns and trends in the dataset. This included visualizing the distribution of house prices, exploring relationships between predictors, and identifying key variables for further analysis. Additionally, I worked closely with Charntel on **model building**, testing multiple regression models and determining which predictors were most significant in explaining house price variability.
* **Charntel**  
  Charntel took a central role in **model building**, working alongside me to fit various regression models and compare their performance using metrics such as R2R^2, Adjusted R2R^2, AIC, and BIC. She focused on testing interaction terms between predictors to evaluate whether these combinations could provide additional explanatory power for the model. Her expertise in regression analysis was instrumental in refining the model and ensuring it met the project objectives.
* **Jing Jing**  
  Jing Jing was responsible for **model diagnostics**, focusing on evaluating residual plots, assessing normality and homoscedasticity, and identifying potential outliers and high-leverage points. Her diagnostic work provided crucial insights into model improvements, ensuring that the final model addressed key statistical assumptions and provided robust results. She also suggested minor adjustments that contributed to improving the overall performance and reliability of the refined model.

**Collective Contributions**

Our team collaboratively searched for and selected the dataset, aligning on project objectives and analytical strategies during multiple discussions. We jointly decided on the data cleaning methods and key predictors for the analysis. After completing individual tasks, we reconvened to consolidate our work and collectively address **recommendations and limitations**, critically evaluating our findings and providing actionable insights while acknowledging areas for future improvement.

Together, we authored the final RMarkdown report and created a comprehensive slide deck for our presentation. We collaborated to ensure the slides were concise, visually engaging, and aligned with the project rubric. Each member contributed to the drafting, editing, and finalization of the report and presentation materials.

By combining our individual expertise and working as a cohesive team, we successfully delivered a detailed and insightful analysis of the factors influencing house prices in King County. Each team member’s efforts were critical in achieving this outcome.