Presentation 1

• Links to presentation(s) and code(s) on GitHub:

- [Google Slides Presentation 1](#)
    - See Julia Schaffner's documentation for a link to the ppt presentation with PowerBI embedded visualizations. The google slides only contain the static graphics.
- All coding was done in Power BI: see below

• What did you do?

I collaborated with Julia in order to create the visualization "No Answer From Customer" count versus "Starting Hour" bar graph. I first started by utilizing the code provided by Prof. Krishna to compile the All Calls Data by month into one single csv file. I also ran the code once again provided by Prof. Krishna to compile the CAR flow into a singular csv file. I then uploaded the data to PowerBI, but ultimately chose to work within Julia's PowerBI dashboard for efficiency and timing reasons.

CAR Data:

To prepare the data for further analysis in Power BI, Julia first used the "Group By" function to ensure that each *Contact Session ID* corresponded to a single row, preventing double counting. She then applied the "Advanced Group By" function to perform multiple aggregations, creating four new columns: *Count*, *Call Start Time*, *Starting Hour*, and *All Rows*. Finally, Julia used the "Expand All Rows" feature to access and visualize the nested information within the dataset.

I then plotted the *Starting Hour* against the count of *Contact Session ID* to visualize call activity patterns throughout the day. I filtered the data to include only working hours, from 8:30 a.m. to 5:00 p.m., using solely the CAR data source for this analysis. To refine the results, I

applied a filter on the *Termination Reason* field, selecting only cases labeled

"no_answer_from_customer." This allowed me to focus specifically on unsuccessful call

attempts within regular business hours.

• How does it help the project?

This analysis helps the project by revealing when customers are least likely to answer call

attempts, allowing LegalAide to optimize call timing for improved call success rates. By

identifying that calls answered during peak work hours are less successful, while afternoon calls

tend to have higher pickup rates, we gain insight into customer availability. These findings can

enhance agent training and improve the overall callback effectiveness and customer engagement.

• Issues faced, Attempts to resolve issues, and Issues resolved

The variable "termination reason" from the CAR data had a value "no answer from customer"

which is what I based my analysis on. Looking at the description of the variables from the CAR

data, there was not a clear definition of the value. I chose to interpret this literally as when the

agent picks up the call from the customer in the queue, the customer does not answer. The issue

is still not resolved as the variable definition is not clarified.

• Next steps

- Expand to other metrics that can capture agent success beyond call pickup rates
  - Possibly call duration or resolution outcomes, keeping time of day consistent on x-axis
- Refine dashboard using other filters to find if other termination reasons follow a similar hourly pattern

• References (Mention if you built up on someone else's work)

Used the CAR_data_import_code file and AllCallsData_import_code to combine the datasets,

created by Prof. Krishna.