Make a PDF file with your name <FirstName_LastName>. The file should have the following

information, and must be updated after every presentation.

Presentation 1

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

Link to Presentation 1:

https://docs.google.com/presentation/d/1ViwovAihyQkvApLoMI_lVvebAqhIYT8DEKqZZTu_uP0/edit?usp=sharing

• What did you do?

For Presentation 1, my group met twice to brainstorm potential metrics and Power BI visuals. Since I had never used Power BI before, my first step was getting access through Northwestern and downloading the web browser version (Macs don't support the desktop app). Once approved, I experimented with basic features to start learning how to navigate the platform.

I then processed the All-Calls dataset in Python and created a combined CSV file, which I emailed to my team. When I tried opening this file in Power BI's web version, I got a "load failed" error. That's when I realized the web version on Macs can't handle files that large. One of our members, Edwin, had a non-Mac computer and was able to open it. When he did, we noticed more than 500 data errors. We fixed this by converting the call number column to a string within Power BI.

Because only Edwin could open the dataset and we continued facing performance issues, we limited our analysis to one month of data (August 2025) for this presentation. I helped define and develop our new metric idea, Redirection Performance, which measures the percentage of redirected calls that successfully connect to the intended service or are answered after being redirected. This metric focuses on what happens after a call is routed, helping identify where the system succeeds or loses clients.

I then created an early visual, a bar chart showing the average duration by redirect reason, filtered on inbound (terminating) calls with Edwin on his computer.

• How does it help the project?

This work helps Legal Aid evaluate how effectively their phone system transfers callers to the correct destination. By eventually working to identify which redirection types lead to successful connections, the organization can pinpoint system weaknesses and improve caller retention. This metric and the initial visual developed supports Legal Aid's broader goal of increasing the number of calls successfully handled out of the 70,000 received each year.

Issues faced (if any)

- Power BI on mac (web version) couldn't handle large files
- More than 500 data errors appeared once the dataset was loaded
- Not all team members could open or edit the large dataset simultaneously

Attempts to resolve issues (if any)

We first tried compressing and re-uploading the dataset in smaller chunks. When that didn't work, we delegated Power BI hosting Edwin's non-Mac computer. We also cleaned the data by converting the call number field to a string type, which resolved most of the initial errors. We also tested using the desktops in main to all work on Power BI. It works but we still can't share our work or save it easily.

• Issues resolved (if any)

By focusing on a smaller dataset (August 2025), we were able to successfully visualize and test our proposed metric without overwhelming Power BI's web version. The data type conversion also eliminated some of those load errors.

• Next steps

- Perform analysis on more months of data, ideally across the entire All Calls dataset
- Clarify key definitions that came up when examining Redirection Performance
- Determine whether longer call duration is a positive or negative indicator
- Integrate additional dimensions, such as call category or caller type
- Choose the official metric moving forward, Redirection Performance or Submenu Efficiency

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

Our work builds on the original Legal Aid All Calls dataset provided by the client. We adapted the dataset using Python-based preprocessing script and incorporated internal definitions of call outcomes and redirect reasons from the client's documentation.

Presentation 2

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

• What did you do?

• How does it help the project?

• Issues faced (if any)

• Attempts to resolve issues (if any)

• Issues resolved (if any)

• Next steps

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

Presentation 3

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