Executive Summary
My goal is to create a dashboard showing information about Nashville police calls over the past 5 years, and to bring in weather information to see if there is a correlation between precipitation or temperatures and what calls are reported.

Motivation
When our class was working with data.nashville.gov, I saw the active dispatch report and thought that working with it could present an interesting challenge and fuel some interesting questions. A real-time data pipeline is what sparked my interest, but is too big of a project to reliably take on for the MVP given our time frame so it will be a stretch goal. My main project will be to work on a dashboard of Nashville police service call data, and combine it with weather data.

Data Question
How does Nashville police call data compare over the last several years? Additionally, how do weather events such as precipitation, wind, storms, or temperature fluctuations influence the frequency and nature of police calls?

Minimum Viable Product (MVP)
I'm aiming for a Power BI dashboard showing interesting data questions about Nashville police calls over the past several years. I'll aim for a variety of different but relevant visualizations, and multiple pages to dig deeper into the data story.

Schedule (through 4/25/2025)
1. Get the Data (estimated by 4/9/25)
2. Clean & Explore the Data (estimated by 4/14/25)
3. Create Presentation of my Analysis (estimated by 4/17/25)
4. Internal demos (4/18/25) (aiming for at least 85% done!)
5. Demo Day!! (4/25/25)

Data Sources
data.nashville.gov (CSV download) for police call data from 1/1/2020-4/10/2025
www.weather.gov (Selenium web scraping) for weather data from 1/1/2020-4/10/2025
data.nashville.gov for real-time active dispatch data (API)

Known Issues and Challenges
- The MVP, police call data, looks pretty straightforward to obtain whether I use an API or CSVs. No issues expected there, other than maybe interpreting the data.
- www.weather.gov uses dynamic tables, so I'll need to use Selenium or another tool to web scrape the non-static weather data.
- The stretch goal of attempting a real-time data pipeline presents a very large challenge. The data refreshes about every 15 minutes, so I would need to collect the data on a regular interval to get the data, then stitch the information together to get a calculated resolved time. I will probably need to set up a couple computers on different networks to try to collect as consistently as possible.