**Project Reflection**

**Data Sources (one archived and one real-time streaming)**

Connecting data sources was an incredibly arduous and difficult process. First, we spent hours attempting to connect to the Yahoo Sports API using the approach outlined in the various videos and office hour recordings, to no avail. Next, we decided to pivot to using the OpenSky API since the professor had a video about connecting to that. However, both the professor and we had significant issues making the proper connection through dataflows, pipelines, and pub/subs. Despite using the professor’s code, we were unable to get it to work. At one point, the TA met with me 1:1 and prescribed a line of code that made the cloud function work, and we were able to get that operational. However, despite following the videos and instructions word for word, we were unsuccessful in getting the API connected.

With the project deadline approaching, we made the decision to focus on archived data, including the BTS flights data and two new datasets: an historical flight table and a Tweets analysis for the major US airlines. This decision helped us to move on to the meat and potatoes of this assignment: the model and recommendations.

**Elevator Pitch (Project Summary)**

Crafting an elevator pitch for American Airlines illuminated the delicate balance between data-driven narratives and emotional resonance. Our journey, rooted in the staggering $232 million costs of flight delays, highlighted the significance of weaving empathy into our storytelling. Balancing specifics with brevity was a challenge, but the collective insights of our group ensured our message was both impactful and concise. This collaborative endeavor reaffirmed the importance of data, empathy, and teamwork in effective communication. We're proud of our pitch and optimistic about its potential to inspire change.

**Walkthrough Video (Youtube)**

Recording our first group YouTube video on the topic of utilizing ChatGPT to analyze delayed flights data was a collective journey of discovery and collaboration. The preparation stage saw us diving deep into the datasets, each of us bringing a unique perspective to understanding the nuances of flight delays. While we were initially apprehensive about presenting such intricate data on YouTube, ChatGPT became our cornerstone, streamlining our analyses and helping us convey complex information in a relatable manner to our viewers. As a team, we grappled with the dual challenge of ensuring the accuracy of our content while making it engaging.

**Recommendations**

Finding a set of realistic recommendations to address the issues we identified in this project was actually a lot easier than originally anticipated. As we analyzed the data, there were some clear possibilities on steps that could be taken to address the flight delays, but the ability to utilize Chat GPT really enhanced this ability. Chat GPT had a familiarity with the industry and the associated processes that one could only gain from years of working in the industry. The ability to leverage the data training that is built into this LLM creates an incredibly powerful tool. The knowledge from this will be able to aid me in future endeavors for both personal and professional needs.

**Prompt Engineering**

The prompt engineering for this project was pretty straight forward. The way that we were incrementally taught to craft prompts and understand how Chat GPT interprets things helped make this the smoothest interaction with the tool to date. Not only did it help us to engineer quality prompts that were most likely to result in the response we needed, but we were also able to interpret hiccups and misunderstandings in our interaction with Chat GPT as well. This was a particularly fun part of the class.

**Interactive Data Studio Dashboard**

The Looker Studio suite in the Google Cloud Platform worked well to visualize the data we analyzed with ChatGPT. This part went smoothly.