D210 Presentation Outline:

# Introduction:

**Personal introduction:**

* André Davis
* Student of WGU MSDA program
* Current in D210 Representation and Reporting

**Background:**

* Experienced software engineer with 17 years of industry expertise, now specializing in data analytics.
* Passionate about leveraging data to uncover compelling narratives.
* Strong belief in the vital role of healthcare in human life.
  + Personal experience with raising a disabled child.
  + Personally affected by a chronic illness.

# Summary of both datasets:

* **Context:**
  + To enable the executive to improve policy and get it executed to hospitals across the United States
    - **Executive Leadership:**
      * Senior Vice President of Hospital Operations
        + Creates and distributes policies to regional managers.
      * Vice President of Research
        + Performs research to create initiatives to support Senior VP of HO policies.
      * Panel of Regional Managers
        + Implements policies and supporting initiatives within their regional hospitals.
* **WGU Medica Dataset:**
  + Analysis of medical data related to patient readmission rates and the corresponding ailments that contribute to readmissions.
* **U.S. Hospital Overall Star Ratings 2016-2020:**
  + Evaluation of hospital ratings from 2016 to 2020, focusing on key areas such as Mortality national comparison, Safety of care national comparison, Readmission national comparison, Patient experience national comparison, Effectiveness of care national comparison, Timeliness of care national comparison, and Efficient use of medical imaging national comparison.  
    - For the WGU Medical Dataset, two specific ratings were selected to provide support: Readmission national comparison and Patient experience national comparison.

# Outline of Key Results:

1. After conducting a thorough analysis of the comprehensive hospital ratings data alongside specific ratings, it became apparent that patient engagement in the scoring process was below optimal levels. The number of patients leaving actionable ratings is quite low.
2. Despite a notable deficiency in patient ratings and feedback, a strong correlation is evident between hospitals that achieve higher overall ratings and improved readmission rates.
3. Noteworthy factors influencing hospital ratings and readmission status include patient conditions such as high blood pressure, hyperlipidemia, and the frequency of hospital readmissions per patient. These variables play a significant role in determining hospital ratings and readmission outcomes.

# Two different data representations to serve as supporting evidence of results:

1. ‘Hospital Over All Rartings’ – horizonal grouped bar chart
   1. Displays missing data nicely grouped by score and year
2. ‘KPIs based on Medical Conditions’ – Pie charts
   1. Readmission National Ratings
      1. About ¼ is No Ratings
   2. Patient Experience National Average
      1. About ¼ is No Ratings

# Summary of actionable insights:

1. Collaborative efforts between the Vice President of Research and the data analytics team are crucial to identify specific patient groups with conditions associated with high readmission rates. Subsequently, initiatives should be devised to effectively gather feedback from these groups. The Vice President of Hospital Operations should collaborate with the Vice President of Research to utilize the insights gained from these initiatives and develop policies that can be implemented by Regional Managers across their respective hospitals.

1. Despite the limited data available on readmissions and ratings, both the Vice President of Hospital Operations and the Vice President of Research should collaboratively develop initiatives and policies aimed at enhancing hospitals' intervention strategies. The objective is to minimize readmissions and elevate hospital ratings across all recorded areas.