* Business Understanding 1 -10
  + Describe the purpose of the data set you selected (i.e., why was this data collected in the first place?). How will you measure the effectiveness of a good algorithm? Why does your chosen validation method make sense for this specific dataset and the stakeholders needs?
    - The data set that our group selected came the U.S. Department of Transportation's Bureau of Transportation Statistics and "tracks the on-time performance of domestic flights operated by large air carriers" during 2015 (Kaggle). The data is broken up into three separate .csv files: one with flight details for 5,819,079 flights during 2015, one with 14 different U.S.-based airlines, and one with the geographic details of 322 U.S. airports.
    - From this data set we narrowed our scope to only include flights departing from the Dallas area (Dallas Love Field and DFW airports). This is so we can present a more tangible result to our collective audiences, which is both the airlines and the consumers themselves while displaying the possibility of this data being able to be scaled for all airports.
    - The data is important because it takes airline cancellations, one of the aspects of airline travel that is popular fodder for public complaints, and quantifies it in a way that offers the possibility of tangible analysis. For the purposes of this analysis, the variable that we intend to measure is CANCELLATION.
    - The method we utilize is association rule mining and we determine the best course of action by using grouping of patterns to determine the correct probability that this instance will occur. When reviewing association rule mining to determine the best fit for our mining we will use Confidence and Lift to determine the best algorithm.
* Data Understanding 2 -10
  + Describe the meaning and type of data (scale, values, etc.) for each attribute in the data file. Verify data quality: Are there missing values? Duplicate data? Outliers? Are those mistakes? How do you deal with these problems?
* Data Understanding 2 -10
  + Visualize the any important attributes appropriately. Important: Provide an interpretation for any charts or graphs.
* Modeling and Evaluation 1 -10
  + Train and adjust parameters
* Modeling and Evaluation 2 -10
  + Evaluate and Compare
* Modeling and Evaluation 3 -10
  + Visualize Results
* Modeling and Evaluation 4 -20
  + Summarize the Ramifications
* Deployment - 10
  + Be critical of your performance and tell the reader how you current model might be usable by other parties. Did you achieve your goals?
  + If not, can you reign in the utility of your modeling?
  + How useful is your model for interested parties (i.e., the companies or organizations that might want to use it)?
    - This model would be useful to both airline companies and consumer bases. This model helps predict cancelations. This would assist airlines on potential cancelations and how to allocate resources in the DFW area to make sure that they can accommodate their passengers. This would be useful for consumers by helping them plan on their travel time and if a flight is likely to be canceled they could show up to the airport earlier to see if they can get on standby to get onto a earlier flight.
  + How would your deploy your model for interested parties?
    - The deployment of our model would be a combination of SQL sever database and a shinny app. The model would predict if a cancelation would happen and we would record the results in a SQL database from there would have a shinny app connect to the database to query the results from the Airlines/Consumers input to predict if the flight would be canceled.
  + What other data should be collected?
    - Additional data that should be collected so the model works properly would predicted weather including predicted windspeed temperature range and amount of precipitation.
  + How often would the model need to be updated, etc.?
    - This model would be best to be updated daily, however if resources are a struggle and timing this would be preformed weekly at the least.
* Exceptional Work -10
  + Shiny App