**Group Assignment – Prediction Competition**

Alexis Weigel, Mikayla Bardwell, Cora Hansen, Myles Terry

**Project Plan**

**Deliverables**

Submit a link to a GitHub repo containing

* A project plan named `project\_plan.docx`
* A PowerPoint presentation
  + ONLY INCLUDE 1 PPT FILE OR TAS WILL GRADE THE 1ST 1 ALPHABETICALLY
* Predictions for the next 12 periods named `predictions.csv`

**Points (rubric updated soon)**

1. Group work – **20 Points**
   * Project plan in GitHub repo by April 27 @ midnight - **10 Points**
     + - We will look at the data and determine if detrending is necessary since we know that the data has been steadily increasing by month.
       - We will create many models to predict the credit of the galaxy. The models that we will create are:
         * ARIMA model **(Mikayla Bardwell)**
         * TSLM model **(Cora Hansen)**
         * Exponential Smoothing model **(Cora Hansen)**
         * Neural Net **(Alexis Weigel)**
         * Naïve model **(Myles Terry)**
       - We will then cross validate all our models to test how well they work on the data.
       - We will then compare our models based on RMSE and AICc. **(Everyone)**
       - Lastly, we will make a PowerPoint presentation explaining all our data. **(Everyone)**
   * Every group member appears in the git log - **10 Points**
2. Presentation – **40 Points**
   * Amazing Presentation – **40 - Shows understanding of time series models but also explains to people who are not business analytics oriented.**
   * Great Presentation – **35 - Shows understanding but maybe isn't clear to people who are not business analytics.**
   * Good Presentation – **30 - Has issues with understanding and communication**
   * Presentation with major issues – **25 - Major issues**
   * Presentation turned in – **10 - Something turned in**
3. Based on Predictions on New Data – **40 Points**
   * Top 3 Groups – **40 Points**
   * Everyone else – **Comparison to third-best group**