**Loyola Data Analytics Competition: Full set of questions**

Computational/statistical questions:

1. Analyzing the Redwood data provided, what was the overall average Truckload rate per mile in 2019? *Hint: rate per mile is total revenue for a move divided by total mileage. Please also note that “Dry Van” and “Truck” mean the same thing here:*
   * Using this Redwood rate per mile data, rank the [7 FreightWaves Futures lanes](https://s29755.pcdn.co/wp-content/uploads/2019/06/Trucking-Freight-Futures_20190626.pdf) (page 2 at link) by rate volatility for full year 2019.
   * Rank these lanes by total Redwood Truckload volume for full year 2019.
2. Rank the lanes provided in the FreightWaves data by total intermodal volume for full year 2019.
3. Graph monthly volatility in fuel prices by markets provided in the FreightWaves data. Do any markets stand out to you in particular?

Managerial insights questions:

1. Briefly explain how the mixture of spot and contract (% of total volume) of Dry-Van freight in the Redwood Data varied throughout 2018-2019. What factors do you think would cause a shipper to sign a forward-looking Truckload rate contract or rely on the spot market?
2. Based on initial analysis, please list and explain the (3) “external factors” from the FreightWaves data you think look the most promising for predicting 2020 dry van shipper rates as a Shipper.
3. What other insights can you provide a shipper based on these data sets?

The first three questions are primarily exercises in data analysis. Unless the answers to those questions support your answers to the managerial insights questions, your submission need not spend much time explaining those answers.

Your final submission will primarily be assessed based on your answers to the Managerial insights questions above.