Johnson & Johnson North America's Deliver Data Science Take Home Project

Expected Time Commitment: 3-4 Hours

Background

In Johnson & Johnson's supply chain, the Deliver team receives products from our manufacturing team and delivers products to our end customers. One of our responsibilities is to get the best pricing on shipments from our distribution centers to our customers.

Inputs

We are providing you with two files. One represents a list of shipment line items with total shipping prices for those shipments. The other file is a data dictionary to give a brief explanation of that data.

Alternatively, you could also download the data from the USAID api at:

https://data.usaid.gov/resource/a3rc-nmf6.json

Goal

Produce a solution with the attached data set that estimates/predicts total freight costs for any given shipment

Output

1.) Return your solution and the code to produce it. We would love to see comments and notes embedded within the solution that will help us work through your answer.
2.) Write up a light report on how you came up with your solution and your findings of its effectiveness.

Other Notes/Suggestions

You can use whatever programming language/tools you'd like.

You're also allowed to use whatever modeling techniques you'd like, but you should be able to explain your decisions as to why you think the model is a good fit.

Beware of overfitting. We recommend setting up a test/train set or using cross-validation.

The output report does not need to be presentation quality, but it should be understandable. Focus on communication; there's no need to spend time a significant amount of time on presentation

To fairly grade this take-home project, we'll be looking at over 20 predetermined criteria focused on the three pillars of data science. These include coding, statistics, and business communication. We put significant effort into developing these criteria to ensure that, regardless of who grades the exercise, the score accurately reflects the quality of your work.

Questions

If you have any questions or requests, please feel free to reach out to Rich Wolff (rwolff2@its.jnj.com)