Nulogy Data Science Assignment

Instructions

1. Please complete the following assignment using (preferably) Python.

2. If you feel like you have the time and skill set to complete all 2 exercises, feel free to do so.

3. Please push the assignment onto a free, publicly available repository for review (e.g. GitHub or Gitlab).

   For DS applicants, the repo should include:
   - A jupyter notebook with the final code used to solve exercise 1
   - A markdown file with the solution for exercise 2

   If you wish not to push your code onto a publicly available repository, you are free to submit your work in a compressed folder. That said, we do ask that you include your git history in the compressed folder as well.

4. You are free to use any open source library or package to complete the exercises.

Exercise 1: Men's Shoes Price

Data: You can download the data set from here and see the full schema for the data
The dataset includes shoe name, brand, price, and more. Each shoe will have an entry for each price found for it and some shoes may have multiple entries.

Problem Description: Build a model to predict the price of a pair of shoes. You are free to use any model(s) to predict the target label.

You will be assessed on the following outcomes:
1 - thought process
2 - code cleanliness and readability
3 - model selection criteria
4 - model performance

Exercise 2: Machine Learning Solutioning

Special Instructions: Please complete the following exercise using markdown

Data: No data is needed for this exercise

Problem Description: Nulogy would like to build a machine learning product to predict customer demand for SKUs at a retail store. A SKU can be any item such as ketchup bottles for a particular brand, or romaine lettuce.

Please describe how you would approach and solve the problem above. Please remember to include:

- What data you will need to collect
- What features you may need to engineer (if applicable)
- How you would assess the performance of your model
- Anything else you deem important to put together a machine learning solution