You will answer the following questions found at the end of the relevant chapters of the textbook (Larose and Larose).

All questions in this homework are hands-on using SAS EM (and/or EG if necessary).  
Use dataset cereals.csv; a table of variables with explanations is appended to the end.

*Hints:*

* For problems #11 and #12, carefully read the instructions above the questions.   
  For problems #20-#22, don’t ignore the instructions above question #20.
* Even though the questions didn’t ask for it, you are required to properly setting up the project, assign roles and levels to the relevant variables, incorporate necessary EDA and Preprocessing processes, i.e., StatExplore, Graph Explore, dealing with and/or imputing missing values if appropriate, Partition, and Transform Variables if necessary.
* To answer the questions, explore the *Output* results of your regression nodes.

|  |  |  |
| --- | --- | --- |
| **Chapter** | **Question #** | **Points** |
| 5 | 11 | 0.5 |
|  | 12 | 0.5 |
|  | 20 | 0.5 |
|  | 21 | 0.5 |
|  | 22 | 0.5 |

This homework is worth 2.5 points (out of 100 points).

Due date: see syllabus section **Tentative Lecture Outline**

Requirements (Important! Read carefully):

* Use MS Word to build your answers; submit a Word file to Blackboard.
* For non-hands-on questions, elaborate your answers as much as you can. Include and elaborate your rationale if asked, and the main steps taken if relevant.
* **For hands-on questions, you are required to use SAS EM**. Do not only provide the short answer to the question. Besides the short answer, you are required to paste the appropriate screenshots of the relevant steps in SAS EM, including but not limited to, diagram, interface, results output, plot/chart, etc., wherever appropriate. You are advised to err on the side completeness in including screenshots, typically the more the better, as they will allow the Professor or TA to evaluate your competence with SAS.
  + You will receive substantial deduction in points if you only include a short answer, when it is indeed necessary to see relevant screenshots of your EM project and/or process for your Professor or TA to evaluate how you obtained the result in SAS EM.

Variables to be used for solving the problems:

|  |  |
| --- | --- |
| **Variable** | **Definition** |
| Rating | (continuous) Nutritional rating, calculated by *Consumer Reports* |
| Fiber | (continuous) Grams of fiber |
| Sugars | (continuous) Grams of sugars |
| *Note* | *Other variables omitted for this assignment.* |

For your EM project, you should *Reject* all other inputs. For your Simple Regression Model, you will *Reject* variables *Sugars* and only keep *Fiber* as input.