Based on your experience with SDLC Exercise Part 1, now create your own project with your own data set.

Remember to use the basics of the Python programming language that you have learned.

Recall that back in Chapter 2, we discussed the “Software Development Process,” also known as the “Software Development Life Cycle.” While there are variations in the names of each phase, our text identified the following phases of the waterfall model:

1. Customer Request
2. Analysis
3. Design
4. Implementation
5. Integration
6. Maintenance

For this assignment, you will need to address all six areas.

**Deliverables (4):**

1. **A Word document (addressing the project), approximately three pages, with sections/paragraphs on the following: (DO)**
   1. Summary of the project (Question, Analysis Conducted, Results, Recommendation)
   2. Customer Question
   3. Data set discussion (include descriptive statistics)
   4. Analysis discussion
   5. Results
   6. Impact
   7. Recommendation from among at least three alternatives
   8. Brief plan to implement the recommendation
   9. A brief discussion on how to maintain the project (how often to review the issue).
2. A **PowerPoint presentation** on the project with at least the following sections:
   1. The question posed by the customer.
   2. The data set used (include descriptive statistics)
   3. The analysis you conducted (ANOVA, Linear Regression, etc.)
   4. Results of your analysis
   5. Impact on the organization
   6. Recommendation (from among at least three alternatives provided)
3. **A Python program that reads the data and produces the analysis. (DO)**
   1. Include docstring
   2. Include algorithm
   3. Comment your code appropriately
   4. Greet the user
   5. Provide instructions
   6. Exit gracefully
   7. Program runs
   8. The program produces correct results
   9. The program provides at least one data visualization
   10. The program provides at least one data table
4. Your **dataset**(Excel file, txt, or csv)

Remember to use...

* NumPY - [https://www.w3schools.com/python/numpy/default.asp (Links to an external site.)](https://www.w3schools.com/python/numpy/default.asp)
* Pandas - [https://www.w3schools.com/python/pandas/default.asp (Links to an external site.)](https://www.w3schools.com/python/pandas/default.asp)
* MatPlotLib PyPlot - [https://www.w3schools.com/python/matplotlib\_pyplot.asp (Links to an external site.)](https://www.w3schools.com/python/matplotlib_pyplot.asp)

DO

<https://www.kaggle.com/datasets/laavanya/human-stress-detection-in-and-through-sleep>

File name in this link above: SaYoPillow.csv

You access this link above to download the csv file that is the data source for this project.