Questionnaire: Quality Analysis of OpenAI's ADA Tool

Imagine you are currently learning Data Science, Mathematics, or another similar field. In doing so, you come across the topic of "Multiple Linear Regression." Linear regression is an important foundation for understanding further regression models. The model has many assumptions that need to be checked. To understand these, you upload a dataset to ChatGPT and use an optimized prompt. Under this link, you will find the output from ChatGPT as a PDF, Jupyter Notebook, and HTML file (PDF file is recommended or download the HTML file and open it in your browser (do not open it from OneDrive, as it causes incorrect display of formulas)):

https://1drv.ms/f/s!Aodd-gCxUoPPhrBf3b355pLrYI_ZtQ?e=db3liw

Please read through the output and answer the following questions. Your answers will be used to create an AI assistant optimized for this topic. This AI assistant should be able to help future students understand the topic in an applied manner, rather than just learning the theory.

Question	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Part 1: Explanatory Data Analysis					
I have a general understanding about the dataset	☐	☐	☐	☐	☐
I understand how to read the provided histograms	☐	☐	☐	☐	☐
I understand how to read the provided boxplots	☐	☐	☐	☐	☐
I understand how to read the provided ECDF plots	☐	☐	☐	☐	☐
I understand how to read the provided QQ plots	☐	☐	☐	☐	☐
Part 2: Preparations for Regression Diagnostics					
I understand the assumption of a linear regression model	☐	☐	☐	☐	☐
The mathematical equations are helpful for my understanding	☐	☐	☐	☐	☐

Part 3: Regression Diagnostics					
Outliers					
I understand what outliers are.	☐	☐	☐	☐	☐
I understand the methods to check for outliers.	☐	☐	☐	☐	☐
I understand the plot and the interpretation.	☐	☐	☐	☐	☐
I need further information on the plot.	☐	☐	☐	☐	☐
I understand the statistical test and the interpretation.	☐	☐	☐	☐	☐
I need further information on the statistical test.	☐	☐	☐	☐	☐
High-Leverage Points					
I understand what high-leverage points are.	☐	☐	☐	☐	☐
I understand the methods to check for high-leverage points.	☐	☐	☐	☐	☐
I understand the plot and the interpretation.	☐	☐	☐	☐	☐
I need further information on the plot.	☐	☐	☐	☐	☐
I understand the statistical test and the interpretation.	☐	☐	☐	☐	☐
I need further information on the statistical test.	☐	☐	☐	☐	☐

Non-Linearity					
I understand what non-linearity is.	☐	☐	☐	☐	☐
I understand the methods to check for non-linearity.	☐	☐	☐	☐	☐
I understand the plot and the interpretation.	☐	☐	☐	☐	☐
I need further information on the plot.	☐	☐	☐	☐	☐
I understand the statistical test and the interpretation.	☐	☐	☐	☐	☐
I need further information on the statistical test.	☐	☐	☐	☐	☐
Heteroscedasticity					
I understand what heteroscedasticity is.	☐	☐	☐	☐	☐
I understand the methods to check for heteroscedasticity.	☐	☐	☐	☐	☐
I understand the plot and the interpretation.	☐	☐	☐	☐	☐
I need further information on the plot.	☐	☐	☐	☐	☐
I understand the statistical test and the interpretation.	☐	☐	☐	☐	☐
I need further information on the statistical test.	☐	☐	☐	☐	☐

Correlation of Error Terms					
I understand what correlation of error terms is.	☐	☐	☐	☐	☐
I understand the methods to check for correlation of error.	☐	☐	☐	☐	☐
I understand the plot and the interpretation.	☐	☐	☐	☐	☐
I need further information on the plot.	☐	☐	☐	☐	☐
I understand the statistical test and the interpretation.	☐	☐	☐	☐	☐
I need further information on the statistical test.	☐	☐	☐	☐	☐
Normality of Residuals					
I understand what normality of residuals is.	☐	☐	☐	☐	☐
I understand the methods to check for normality of residuals.	☐	☐	☐	☐	☐
I understand the plot and the interpretation.	☐	☐	☐	☐	☐
I need further information on the plot.	☐	☐	☐	☐	☐
I understand the statistical test and the interpretation.	☐	☐	☐	☐	☐
I need further information on the statistical test.	☐	☐	☐	☐	☐

Collinearity of Predictors					
I understand what collinearity of predictors is.	☐	☐	☐	☐	☐
I understand the methods to check for high-leverage points.	☐	☐	☐	☐	☐
I understand the plot and the interpretation.	☐	☐	☐	☐	☐
I need further information on the plot.	☐	☐	☐	☐	☐
I understand the statistical test and the interpretation.	☐	☐	☐	☐	☐
I need further information on the statistical test.	☐	☐	☐	☐	☐

After you have answered the questions, please describe positive or negative aspects of the output. Please also describe what you are studying or in which field you are working.

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Thank you all for helping me with my bachelor's thesis! ☺