03 EA - Linear models

Grading criteria (34 points)

Part I: Crawling (11 points)

Exercise 1 (2 points)

You will earn 2 points if the code outputs correctly, 1 point if the code misses the summary, and 0 points if the code contains significant error.

Exercises 2 (2 points)

Exercises 2 will be graded out of 2 points. You will earn 2 points for a well-written answer that is correctly formated (note the speacial `y_hat` in your writing), 1 point if there is some error in the writing or calculation, and 0 points if the problem is largely incomplete.

Exercise 3 (7 points)

Exercise 3 will be graded out of 7 points.

Part I: scatter plot (2 points) and **Part II: density plot** (2 points)

You will earn 2 points for a correct figure with both of the following two things checked.

- well-named labels for x- and y- axises
- well-named tilte

You will get 1 point if the figure was incorrect OR the figure was correct but with missing check points. You will get 0 points if the problem is largely incomplete.

Part III: check conditions (3 points)

You will earn 3 points for a perfect answer: solution is both correct and well-written.

- You have checked all four conditions for linear regression
- The writing is clear and in complete sentences
- The organization of the answer is clear and easy-to-read.

You will earn 2 points if there are any missing conditions or the writing/organization has small flaws.

You will earn 1 point if your solution has some more serious flaws, such as a conceptual error. OR The writing has more serious flaws (for example your solution is not written in sentences).

You will earn 0 point if your solution is largely incomplete, or more seriously flawed in both writing and correctness.

Part II: Drug use (17 points)

Exercise 4 (2 points)

You will earn 2 points if the code outputs correctly, 1 point if the code misses the summary, and 0 points if the code contains significant error.

Exercise 5 (2 points)

Exercises 6 will be graded out of 2 points. You will earn 2 points for a well-written answer, 1 point if there is some error in the writing or calculation, and 0 points if the problem is largely incomplete.

Exercise 6 (7 points)

Exercise 6 will be graded out of 7 points.

Part I: scatter plot (2 points) and **Part II: density plot** (2 points)

You will earn 2 points for a correct figure with both of the following two things checked.

- well-named labels for x- and y- axises
- well-named tilte

You will get 1 point if the figure was incorrect OR the figure was correct but with missing check points. You will get 0 points if the problem is largely incomplete.

Part III: check conditions (3 points)

You will earn 3 points for a perfect answer: solution is both correct and well-written.

- You have checked all four conditions for linear regression
- The writing is clear and in complete sentences
- The organization of the answer is clear and easy-to-read.

You will earn 2 points if there are any missing conditions or the writing/organization has small flaws.

You will earn 1 point if your solution has some more serious flaws, such as a conceptual error. OR The writing has more serious flaws (for example your solution is not written in sentences).

You will earn 0 point if your solution is largely incomplete, or more seriously flawed in both writing and correctness.

Exercise 7 (3 points)

You will earn 3 points for a perfect answer: solution is both correct and well-written.

- The linear equation is written in correct format
- The predicted value and residual are computed correctly
- The writing is clear and in complete sentences
- The organization of the answer is clear and easy-to-read.

You will earn 2 points if there is some small error in your computation. Or the computation is correct, but the writing/organization has small flaws.

You will earn 1 point if your solution has some more serious flaws, such as a conceptual error. OR The writing has more serious flaws (for example your solution is not written in sentences).

You will earn 0 point if your solution is largely incomplete, or more seriously flawed in both writing and correctness.

Exercise 8 (3 points)

Part I: coding (2 points)

You will earn 2 points if the code outputs correctly, 1 point if the code contains small error, and 0 points if the code contains significant error.

Part II: explaination (1 point) You will earn 1 point for a well-written answer that is mostly correct, and 0 point if there is some significant error in the writing, or the problem is largely incomplete.

Part III: Course evaluation (4 points)

Exercise 9 (2 points)

You will earn 2 points if the code outputs correctly, 1 point if the code misses the summary, and 0 points if the code contains significant error.

Exercise 10 (2 points)

Part I: intercept (1 point)

You will earn 1 point for a well-written answer that is mostly correct, and 0 point if there is some significant error in the writing, or the problem is largely incomplete.

Part II: slope (1 point)

You will earn 1 point for a well-written answer that is mostly correct, and 0 point if there is some significant error in the writing, or the problem is largely incomplete.

Peer evaluation (2 points)

You will be asked to fill out a survey where you rate the contribution and teamwork of each team member out of 10 points. Your grade in this section will be an average of the scores you got from your peers. You will additionally report a contribution percentage for each team member. Filling out the survey is a prerequisite for getting credit on the team member evaluation. If you are suggesting that an individual did less than 15% of the work, please provide some explanation. If any individual gets an average peer score indicating that they did less than 15% of the work, this person will receive half the grade of the rest of the group.

Extra Credit (max 4 points)

Each exercise in the extra credit seciton will be graded out of 2 points. You will earn 2 points for a perfect answer: solution is both correct and well-written.

- The code outputs are correct
- The plot is correct, appropriately labled and named.
- The writing is clear and in complete sentences
- The organization of the answer is clear and easy-to-read.

You will earn 1 point if there are some minor errors, and 0 points if there are some major issues.