

Lab 6: Pandas + Matplotlib.pyplot practice

This is an INDIVIDUAL assignment. Due date is as indicated on BeachBoard. Follow ALL instructions otherwise you will lose points. In this lab, you will be finding the probability of a future outcome based on some current state

Background:

We have covered how to use pandas and matplotlib. Your task for this lab is to analyze a given dataset to find a correlation between a baby's birthweight and other factors:

	A	B	C	D	E	F	G	H	I	J	K
1	Birthweight	Gestation	mage	mnocig	mheight	mppwt	fage	fedyrs	fnocig	fheight	
2	4.55	44	20	0	162	57	23	10	35	179	
3	4.32	40	19	0	171	62	19	12	0	183	
4	4.1	41	35	0	172	58	31	16	25	185	
5	4.07	44	20	0	174	68	26	14	25	189	
6	3.94	42	24	0	175	66	30	12	0	184	
7	3.93	38	29	0	165	61	31	16	0	180	
8	3.77	40	24	0	157	50	31	16	0	173	
9	3.65	42	21	0	165	61	21	10	25	185	

The data set looks like this:

- Birthweight: baby's weight at birth
- Gestation: gestation period in weeks
- Mage: mother's age
- Mnocig: Number of cigarettes per day smoked by mother
- Mheight: mother's height
- Mppwt: mother's pre-pregnancy weight
- Fage: father's age
- Fedyrs: father's years of education
- Fnocig: number of cigarettes per day smoked by father
- Fheight: height of father

Task:

Note, there is no starter code for you. You must develop this program independently.

Make 9 SEPARATE graphs (do not put them all on one graph)

1. Birthweight vs gestation period
2. Birthweight vs mother's age
3. Birthweight vs number of cigarettes (mother)

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Each graph MUST have the following:

1. Proper x labels
2. Proper y labels
3. Proper title

Take a screenshot of all of your results and compile it into one document. In this document, discuss your findings. What correlations can you find?

Submit your python file (.py) and your report (as a pdf). No .txt file is required for this submission. Please use the same naming format! lastName_firstName_section#_idNumber.py

Also, please note that there are no test cases! We will not be testing further test cases either. We will be looking over your report and running your code to see that your program matches with the results that you have provided to us in the pdf. Any inconsistencies between your program and the report will result in an AUTOMATIC ZERO!

Grading rubric:

To achieve any points, your submission must have the following. Anything missing from this list will result in an automatic zero. NO EXCEPTIONS!

- Submit both py and pdf files
- Files named correctly
- Program has no errors (infinite loops, syntax errors, logical errors, etc.) that terminates the program

Points	Requirement
18	Correct graphs in report and they match with the python program (2 points each)
5	Graphs have proper labels and titles
2	Correct analysis of graphs in report