

- 1.) Well for "Chapters Read vs Lectures Attended" I predict that the correlation would be near zero because reading and attending class do not have a sort of distinguishable relationship.

For "Chapters Read vs Final Grade" I predict that the correlation would be for the most part that people who read the chapters, they will get a better final grade than those who do not. In short, a strong and positive correlation. Whereas if the grade is higher it means that they would be reading and if they are reading then the grade will be higher. For "Lectures Attended vs Final Grade" I predicted that the correlation would be strong and positive as well where the more lectures attended, the better the final grade will become.

- 2.) Given the scatterplots, the chapters read vs the lectures read was all over the place and could be either no correlation or close to zero or even have a very weak correlation, it's hard to tell.

For the chapters read vs the final grade, the scatterplot shows that there is a positive correlation where the more you read the better your final grade will be.

Also, for the lectures attended vs the final grade, it shows that there might be a weak positive correlation since there is a lot going on in the beginning.

- 3.) Calculated:

	Chapters	Attend	Grade
Chapters	1.0	0.4436428	0.4918984
Attend	0.4436428	1.0	0.4821864
Grade	0.4918984	0.4821864	1.0

APA style correlation table:

Variable	Mean	Standard Deviation	1	2
1.Chapters	2.00	1.43		
2.Attend	14.10	4.28	.44**	
			[15, .66]	
3.Grade	63.55	16.71	.49**	.48**
			[.21, .70]	[.20, .69]

- 4.) Given the computed correlations, they were all similar, however the chapters read vs final grade was in a higher % range to be related having about 24%. For lectures attended vs final grade is was 23%. For the last one, chapters read vs lectures attended it was about 19%. While having it in percentage, it makes things easier to understand, so these percentages means the variance is related.
- 5.) The closer r is to +1 or -1, the more closely the two variables are related. Now if we were to change the r to percentages by squaring and removing the decimal, it would make things easier as I've said. It would give us the percentage of the variance for the

variables being related. For Grade vs chapters it was 24% and for grade vs attend it was 23%. Again these percentages being their relationship.

Part 2

- 6.) Data used "Number of Strikes in Us Manufacturing" from <https://vincentarelbundock.github.io/Rdatasets/datasets.html>

The variable are Strikes, Output, and Time. 108 rows, and 3 columns with numeric code.

- 7.) I predict that strikes vs output would be strong and negative since one would decrease as one goes up.
 For strikes vs time I would say close to zero because I do not think they relate at all.
 Also, for Output vs time I would say that as more time goes on the output would decrease and vice versa; so, I predict it to be strong and negative.

- 8.) Calculated:

	X	strikes	output	Time
X	1.0	-0.2243095	-0.1178387	1.0
Strikes	-0.2243095	1.0	0.2306675	-0.2243095
Output	-0.1178387	0.2305575	1.0	-0.1178387
time	1.0	-0.2243095	-0.1178387	1.0

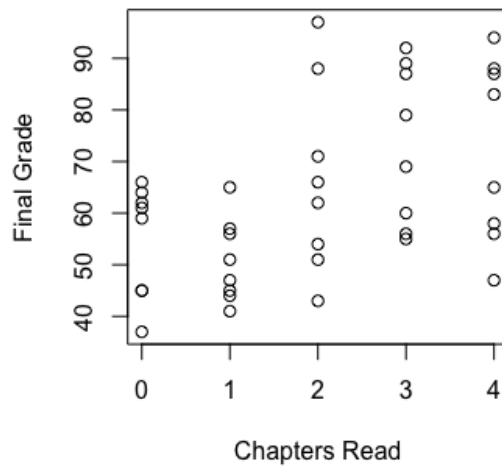
APA style correlation table:

Variable	Mean	Standard Deviation	1	2	3
1.X	54.50	31.32			
2.strikes	5.24	3.75	-.22*		
			[-.40, -.04]		
3.ouput	-0.00	0.05	-.12	.23*	
			[-.30, .07]	[.04, .40]	
4.time	54.50	31.32	1.00**	-.22*	-.12
			[1.00, 1.00]	[-.40, -.04]	[-.30, .07]

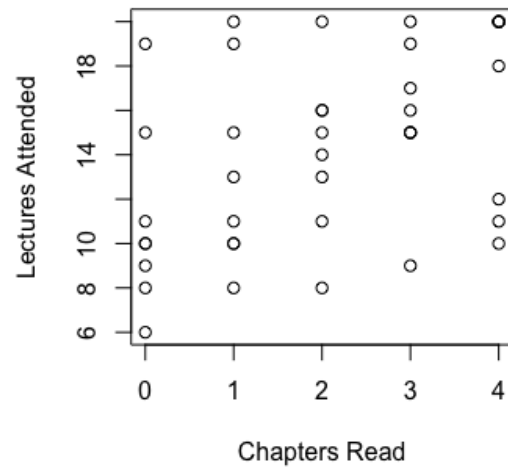
For my predictions were wrong for strikes vs time, it looks to be strong and positive. For variance, strikes vs output it was 5%, strikes vs time was -5%, and output vs time was -1%.

- 9.) There is the matter of X column which is pointless in this data frame as it leaves nothing important for calculations unless it represent people, but we do not have a way of knowing. If I did collect additional information, I believe it would consist of roughly staying the same since if the percentages are so low now with 108 rows of data, then a couple hundred more won't make a difference.

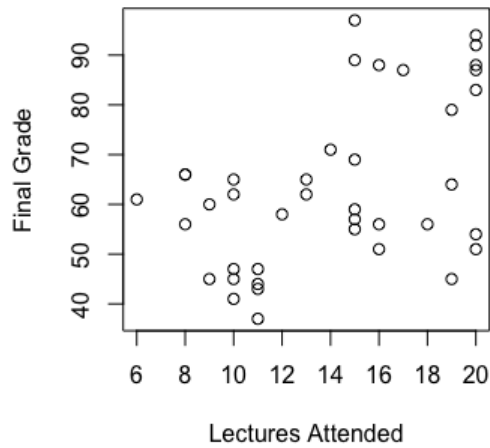
Chapters Read Vs. Final Grade



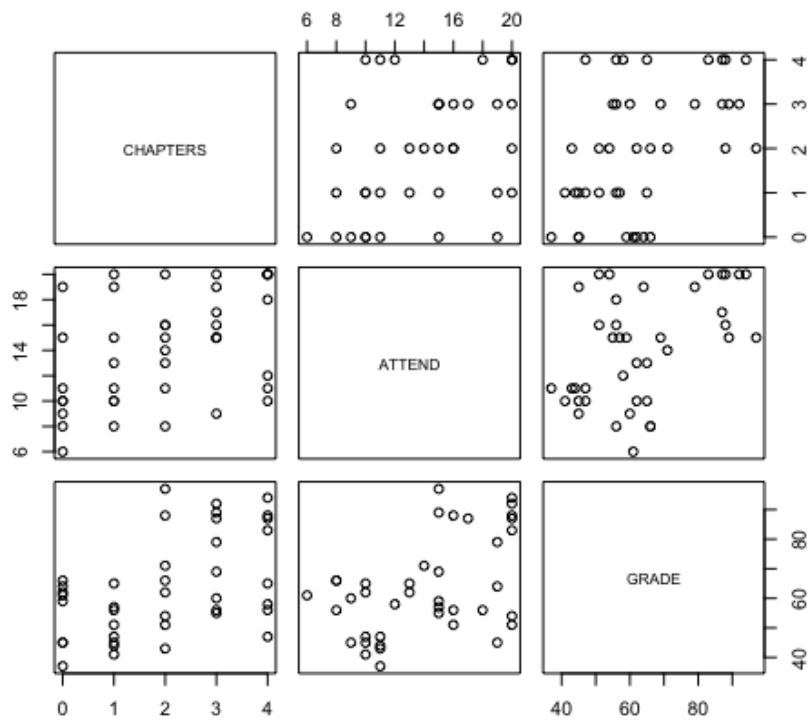
Chapters Read Vs. Lectures Attended



Lectures Attended Vs. Final Grade

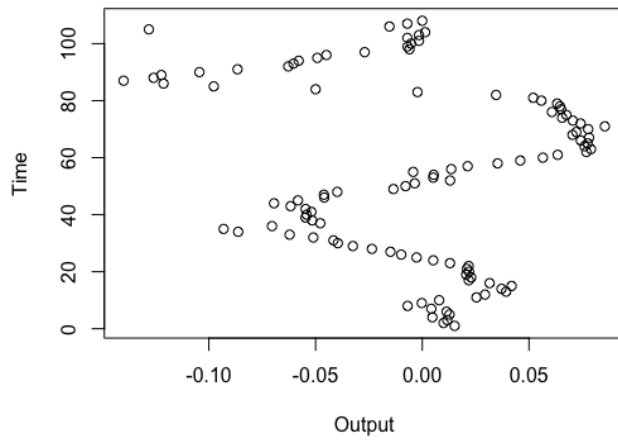


Project 8 scatterplot Matrix

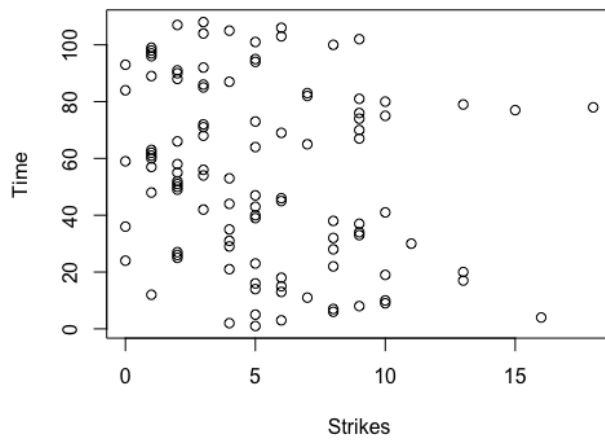


Part 2 images

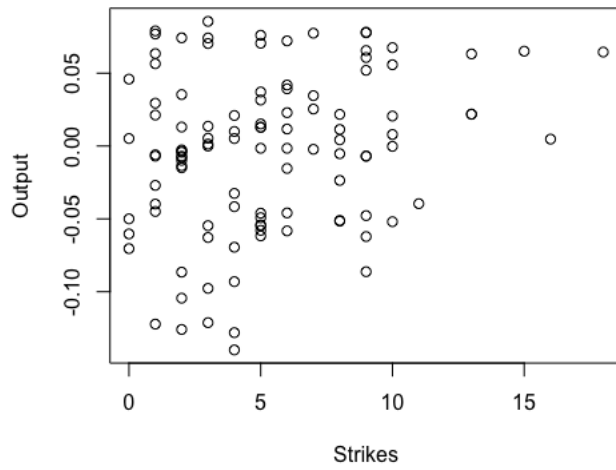
Output Vs. Time



Strikes Vs. Time



Strikes Vs. Output



Project 8.2 scatterplot Matrix

