

INDIVIDUAL PROJECT REFLECTION

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Please submit your answers to the following questions:

- (1) Apart from the specific physics content, what are one or two important things that you learned from doing the project? These could be about physics, about teaching, about collaboration, about yourself, or anything else that you find meaningful.
- (2) Was there anything interesting or surprising that you learned from the peer reviews?
- (3) Thinking back on the process, how would you judge your own contribution to the effort?
 - I contributed significantly more than my partner
 - We contributed roughly equally
 - I contributed significantly less than my partner

If you answered "significantly more" or "significantly less," please explain.

Please add any other comments about your experience with the project.

Answers:

- (1) I think I learned many things, in particular the importance of trying to understand something very well and then sharing it with colleagues. A while ago, when I took this course during my master's degree, my former mentor joked that now I was learning to "not write the partition function" and at the time I didn't understand what he meant, but after studying the Ising model and work a little more thoroughly with mid-field approximations, I think I get the joke; you can do that, but the problem becomes quite complicated, thus, you try to find clever ways to avoid doing that calculation, clever approximations, for instance. The reason o why I'm sharing this is because my knowledge of statistical mechanics is definitely deeper, I feel more comfortable with the topics in general, and I feel prepared to delve deeper into some topics that I find interesting. Just as I did with the teaching project.
- (2) Overall, I think the feedback was good, in the sense that provides insight in the things that I can improve, for example to be consistent with the notation about E and U . when I was reading several books I found that some people like to use one over another, and I agree that can lead to some confusion. Another classmate wrote that the cicada stuff was cool/interesting, and that made me think that we need to make things more memorable, and introducing some examples like that can help a lot. You notice that I'm really attracted into math, and for me some things are easier to remember whenever are motivated by some math, or when I found some cool result, and that made me think that knowing the interests of the students, can improve how to teach some kind of material.

Date: 05/06/2024.

(3) I think we worked almost 50/50, so we contributed roughly equally.

Additional comments. I did like the project, and this whole project gave confidence to start teaching myself some other things related to statistical mechanics, for example brownian motion, and stocastic processes. As you may notice my language skills are sometimes limited(I'm still improving, and I think I'll always be), but for me this was a great deal; to teach a class in a foreign language means a lot to me.