Michael Lukiman
Response 7
Sampling and Variational Inference

I've been listening to podcasts which mention these topics a lot and am glad to finally come to MCMCs and their specific implementations such as Gibb's Sampling. Almost like the law of induction had a baby with the law of large numbers, the fact that these clear probabilistic mechanics can approximate an extremely complex distribution is what I think many people would call elegant. And of course, it is necessary for tractable computation. It was slightly hard for me to digest the Metropolis algorithm but I look forward to learn about it in class.

After undergrad I actually spent two months working with a professor whose Quantum Mechanics class I had taken (Tim Byrnes); we were working on how machine learning algorithms could be further accelerated using quantum computation - one of these candidate algorithms was variational inference! Of course, I didn't fully understand either of the concepts back then - Tim was just a cool dude that saw I had interest in the topic and offered me some money to stay in his lab. Now, I can say I know a little bit more about the machine learning side of things … cannot say the same for quantum mechanics...

Is it really a constraint on a lifetime not to be able to master both topics, and to have to stick with one or the other? Will the age of market-demanded specialization ever end, despite humans being sometimes curious about all things equally? Ahh!!!!!

Michael - for March 26th