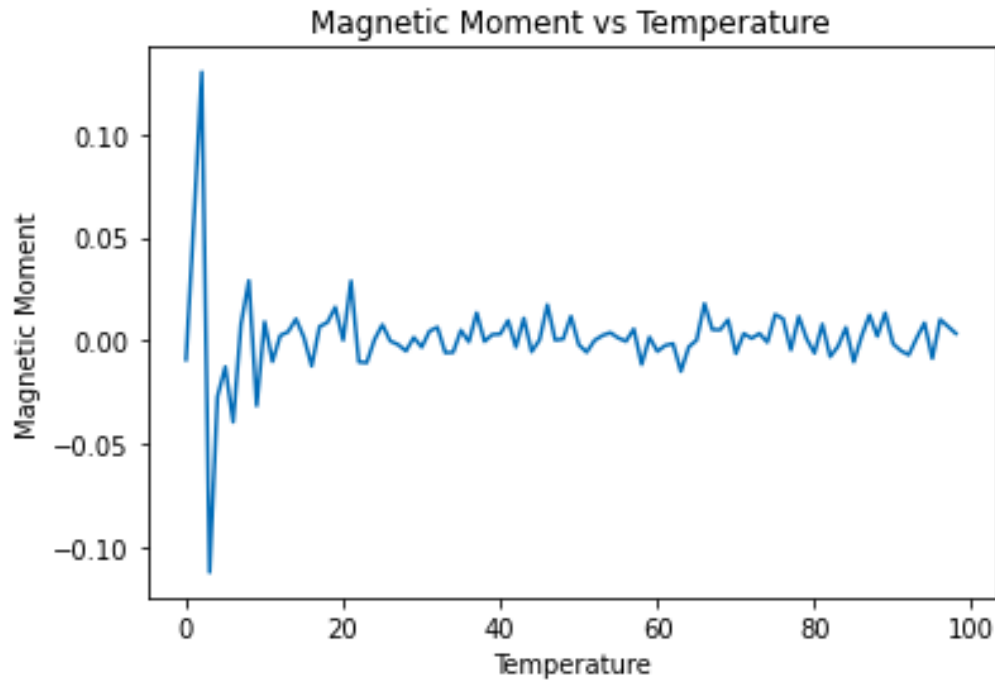


Energy of the System increases because as the temperature rises, the net magnetic moment approaches 0 and thus most of the neighboring spins are in opposite directions and this makes the energy terms cancel out and approach 0 as the temperature rises.



The net magnetic moment over the temperature is 0, as the system remains is positive magnetic moment for half time and in negative magnetization for the other half with equal probability and thus the average net magnetic moment converges to 0.