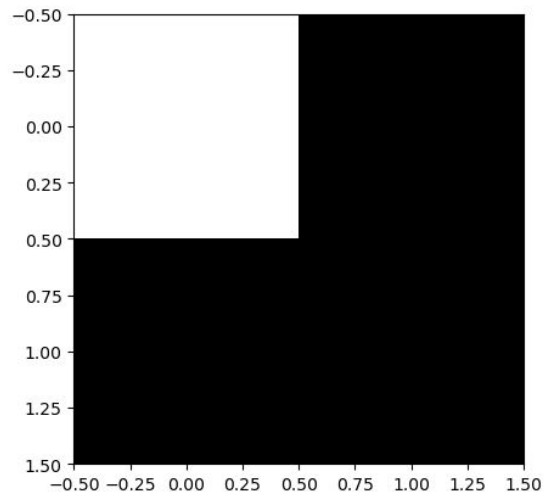


Classical Simulation

2D Ising model (part 1)

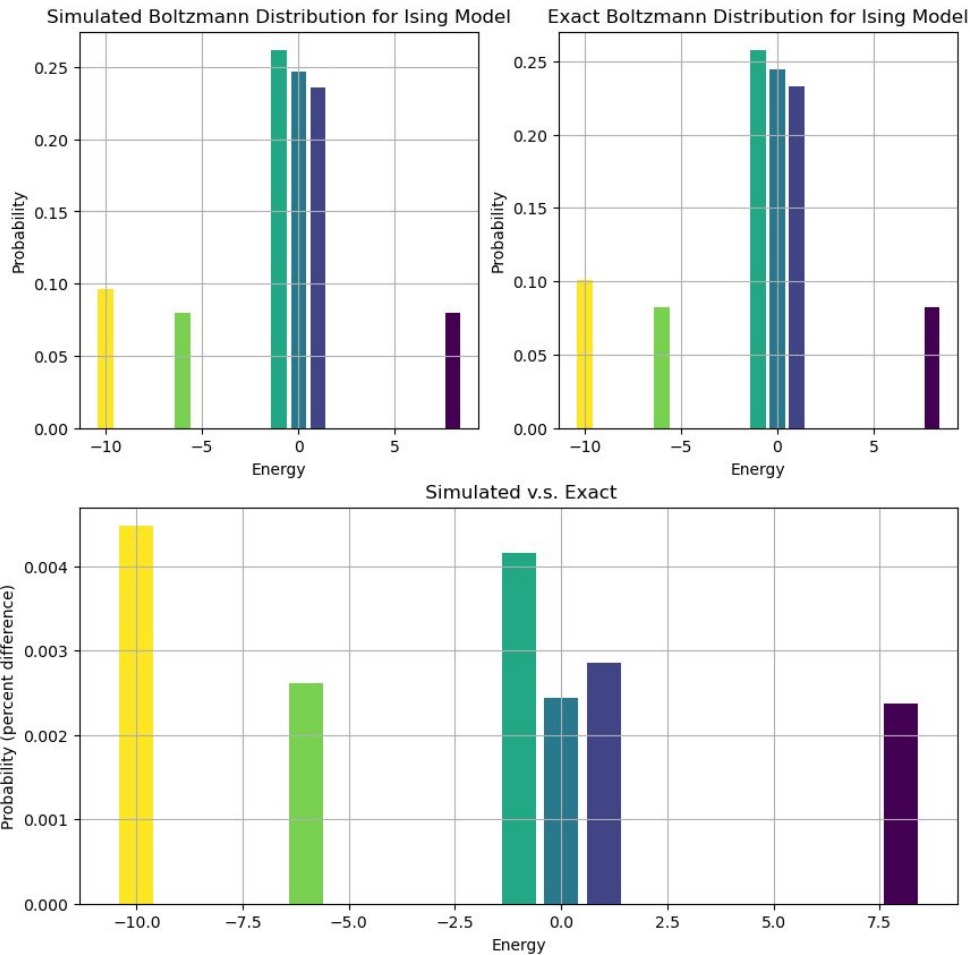
Zihang Wang
11/10/2023

Lattice Size: 2

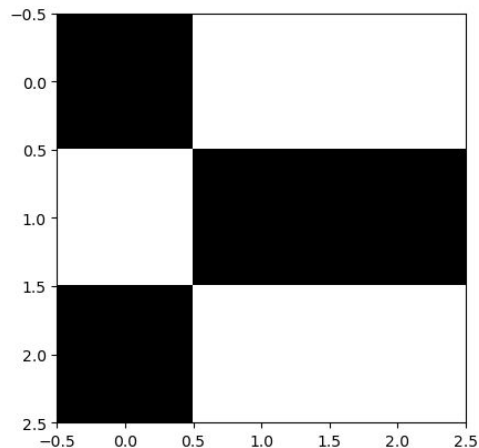


Exact Elapsed Time: 0.0453 seconds

MC Elapsed Time: 0.8785 seconds

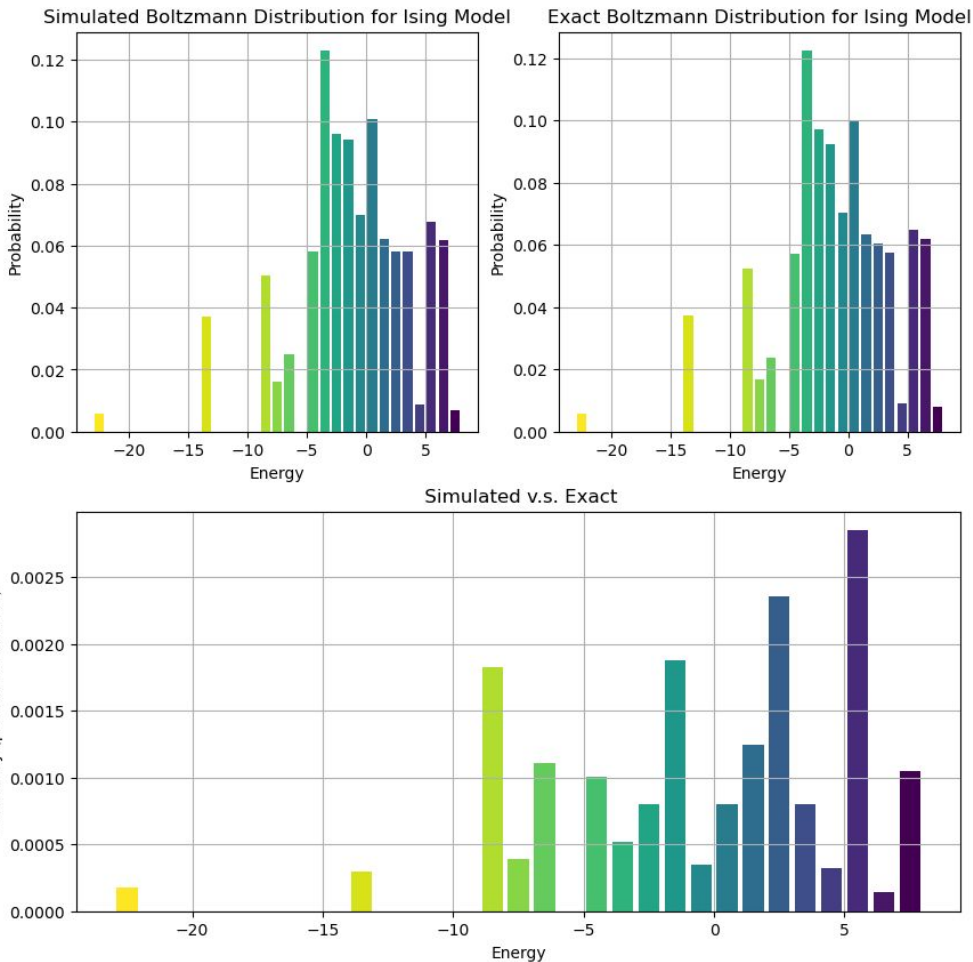


Lattice Size: 3

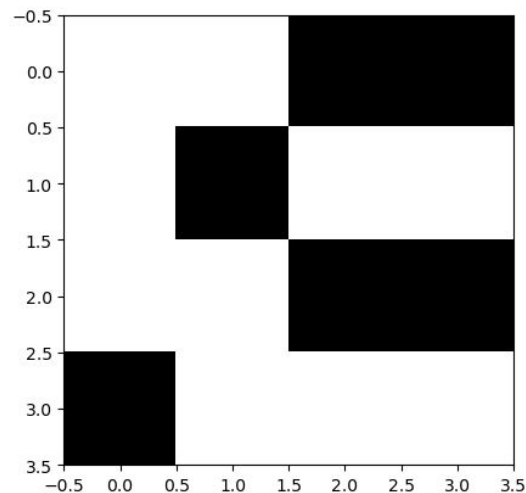


Exact Elapsed Time: 0.0585 seconds

MC Elapsed Time: 1.6032 seconds

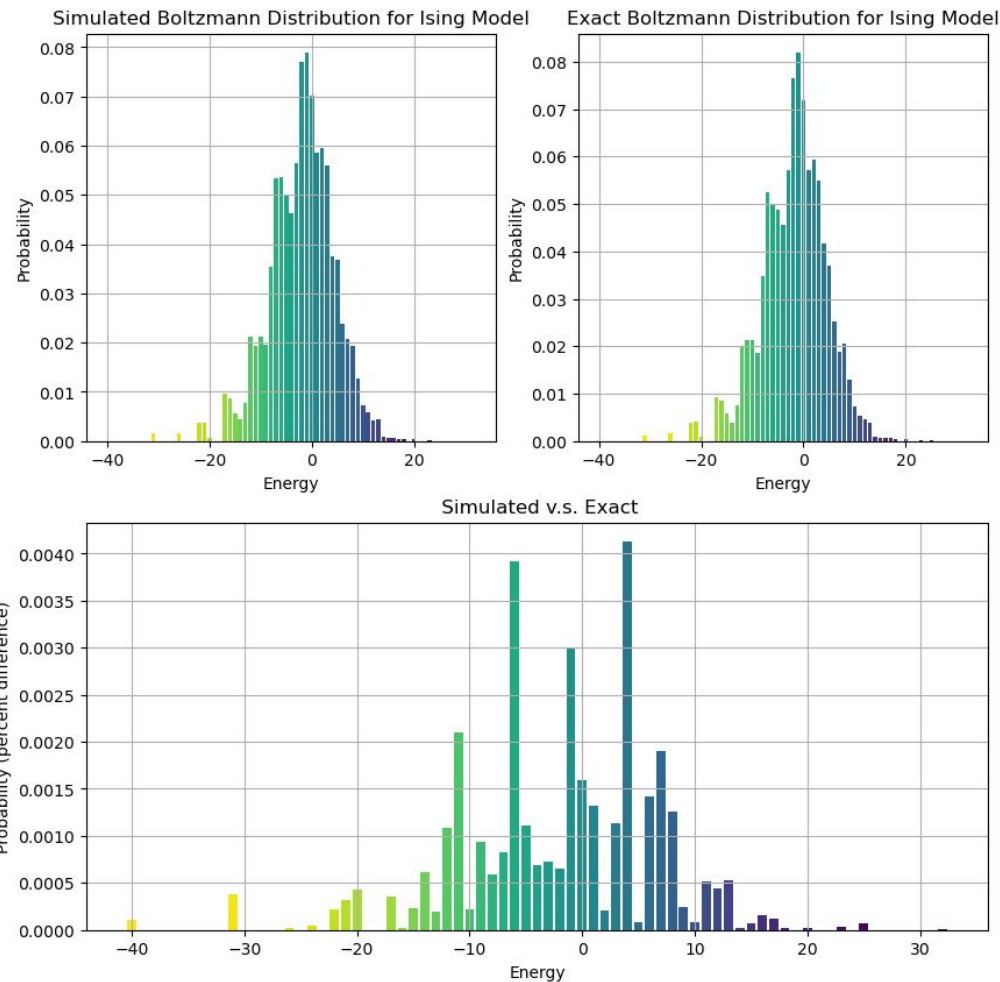


Lattice Size: 4

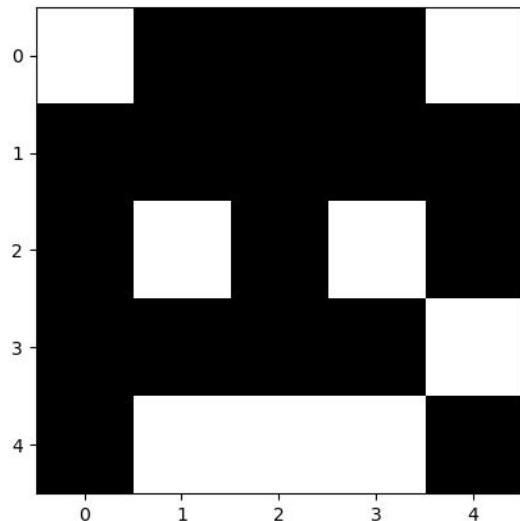


Exact Elapsed Time: 1.4184 seconds

MC Elapsed Time: 2.7794 seconds

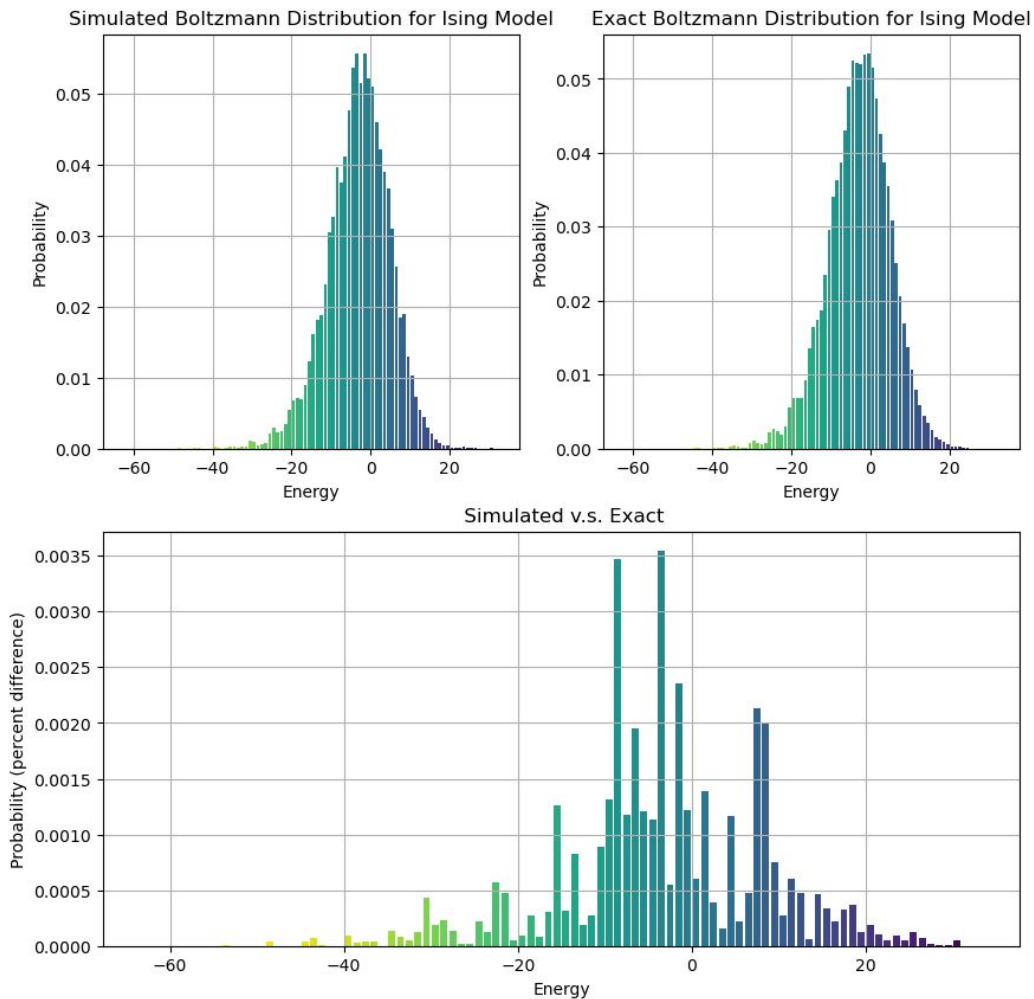


Lattice Size: 5

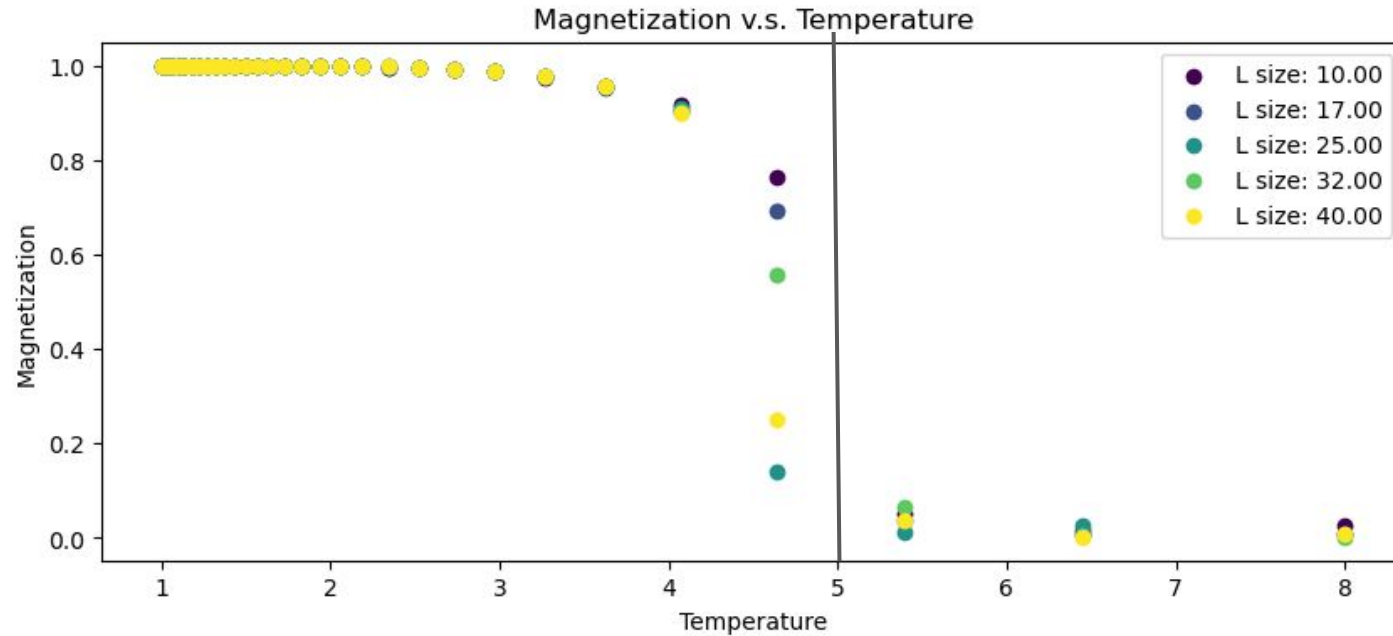


Exact Elapsed Time: 1260.5645 seconds

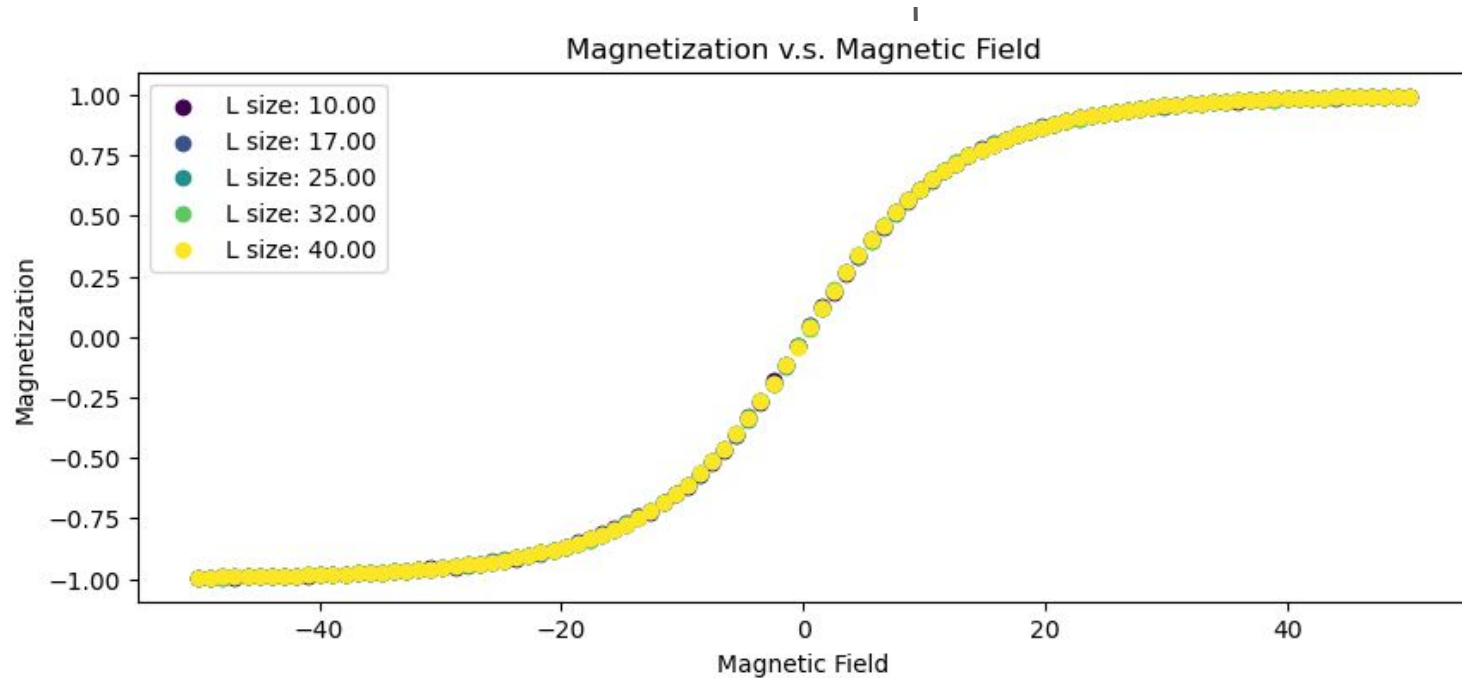
MC Elapsed Time: 4.4076 seconds



Lattice Size v.s. Magnetization (Temperature)

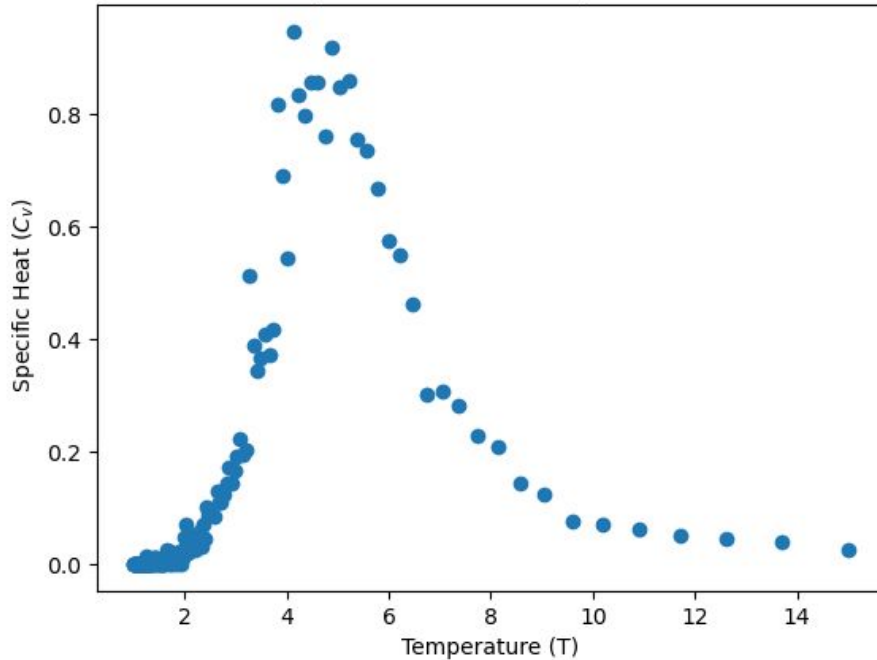


Lattice Size v.s. Magnetization (Magnetic Field)



Specific Heat and Magnetic Susceptibility (Temperature)

Specific Heat v.s. Temperature



Magnetic Susceptibility v.s. Temperature

