# Project 10: The Sznajd Model

Yuan Yuxuan u6772166

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## 1 Project

In this report, the spin up is denoted in yellow, while the spin down is blue. The total number of spins is 30. The fraction of spin up is 0.6 for all three simulations.

I set initial configuration of system randomly and update it 1000 times. We do this simulation three times and get three separate final behaviors (alternating, all up and all down). We do 40 updates in each time step and show the time evolution plots for three cases in fig 1, 3 and 5. We see that the initial state is random, the intermediate state show the evolution and the final state show the equilibrium state(alternating, all up and all down) .We also plot magnetisation versus time in fig 2,4 and 6 for three cases

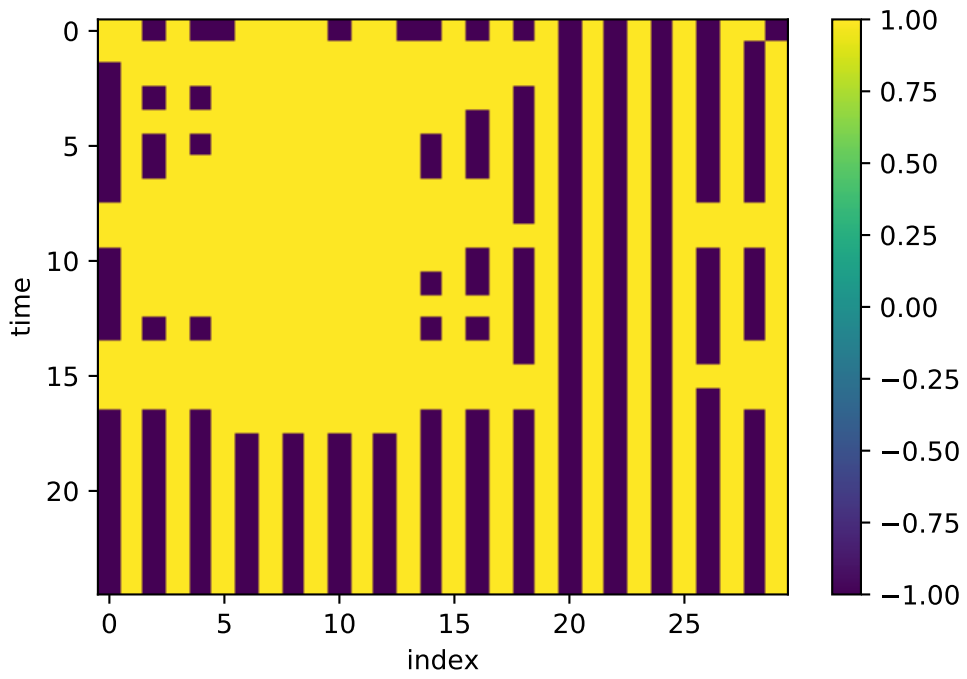


Figure 1: Time evolution plot of system which lead to a alternating configuration ultimately.

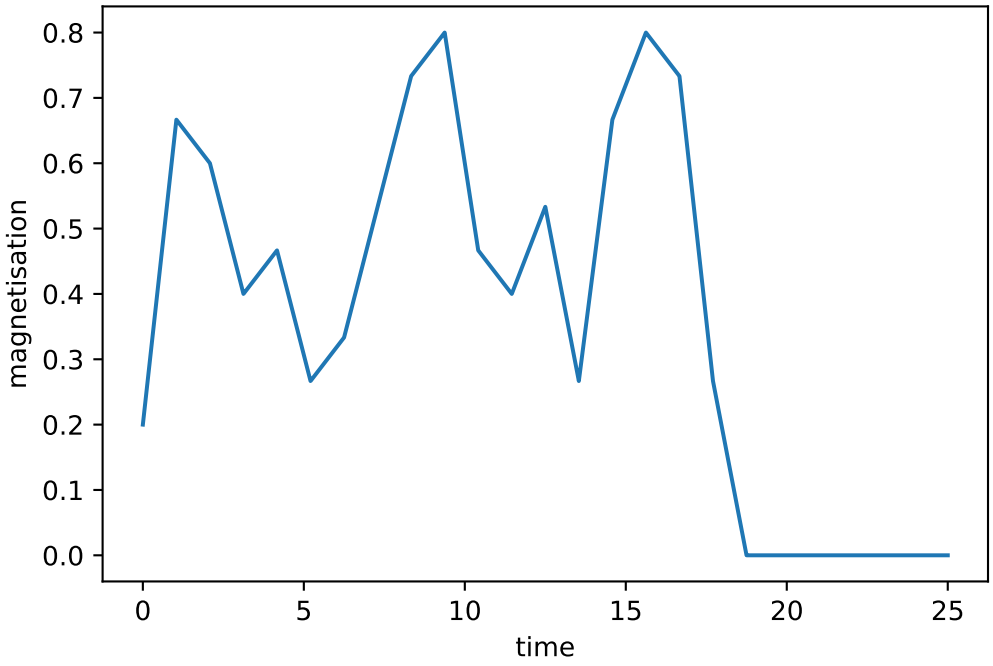


Figure 2: Magnetisation versus time for the cases shown in fig 1.

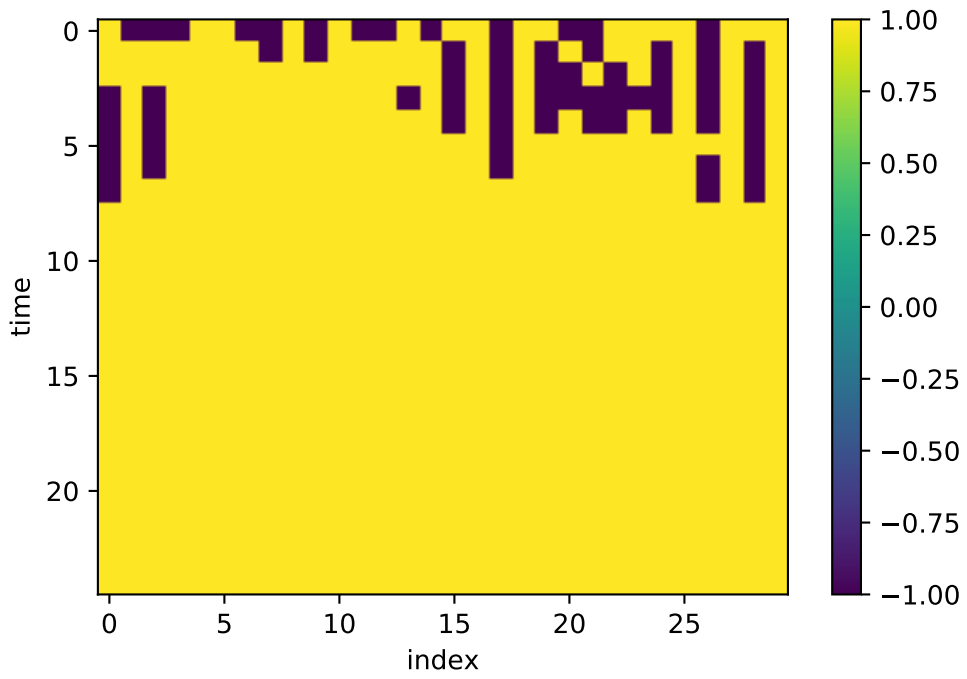


Figure 3: Time evolution plot of system which lead to a all up configuration ultimately

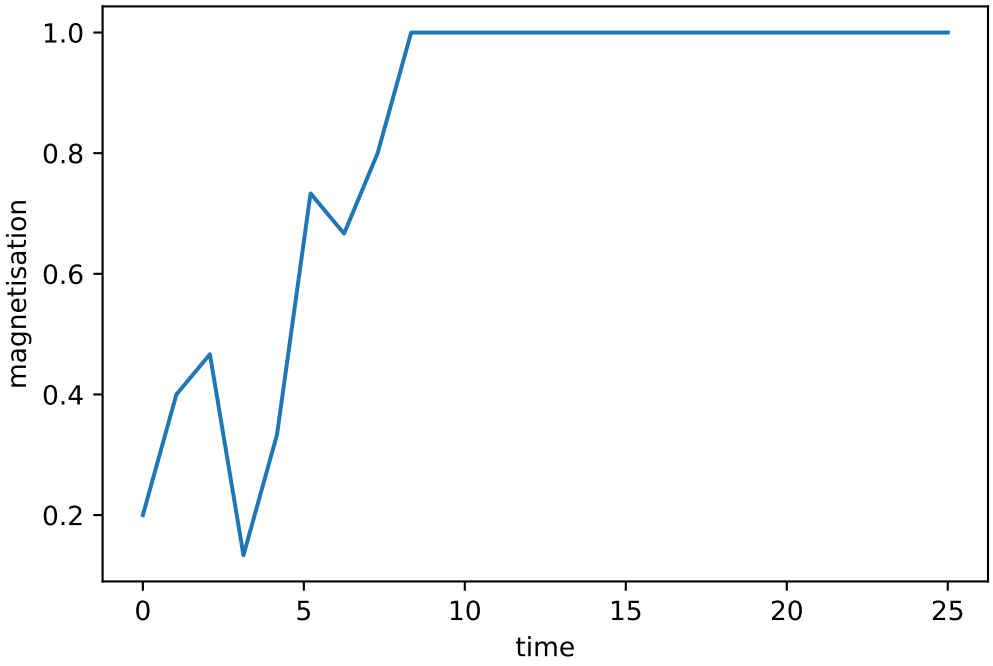


Figure 4: Magnetisation versus time for the cases shown in fig 3.

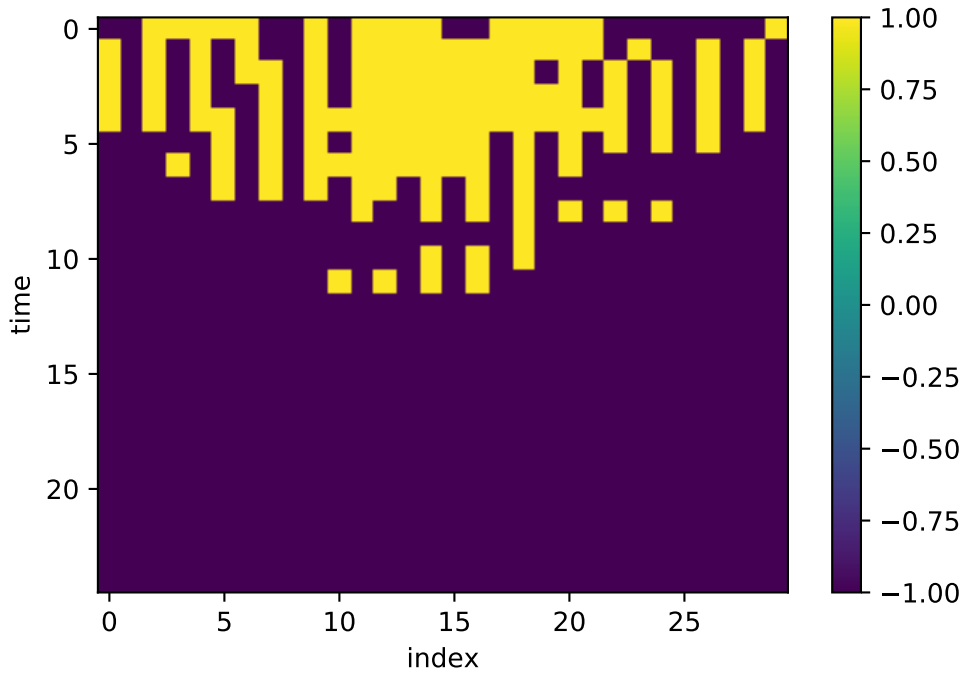


Figure 5: Time evolution plot of system which lead to a all down configuration ultimately

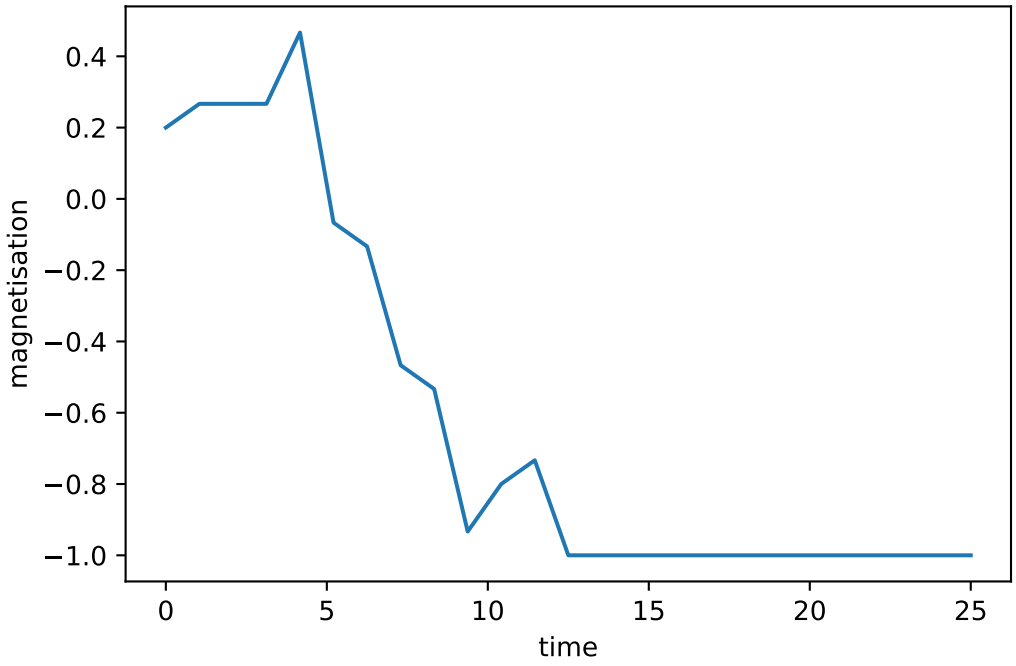


Figure 6: Magnetisation versus time for the cases shown in fig 5.