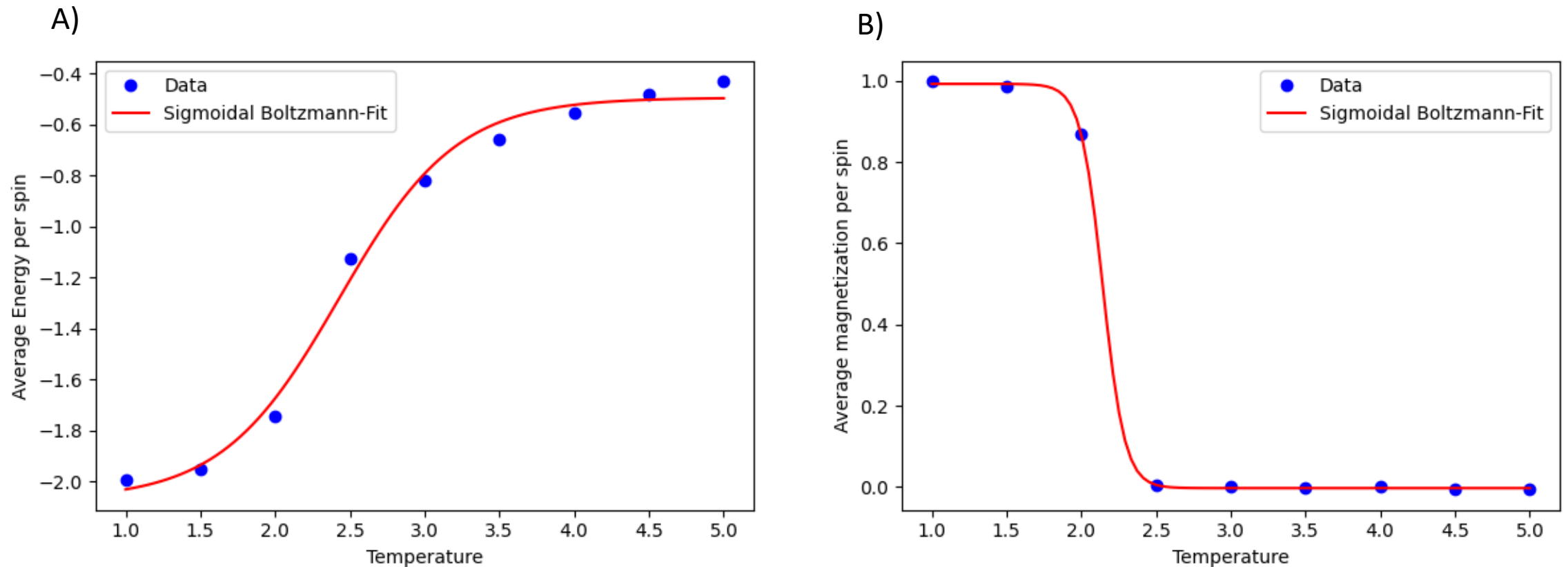


## Sigmoidal Boltzmann-Fit of MC simulation quantities



- Out of  $10^6$  MC simulations: the first 100.000 results were discarded whereas the remaining 900.000 results were considered for the statistical analysis
- A) The plot of the average energy per spin as a function of the temperature within an interval of [1,5] for the temperature shows that the energy rises when the temperature is increased
- B) The average magnetization vs. temperature is beneficial to understand what happens when a solid is heated up gaining entropy leading to disorder, i.e., loss of the ferromagnetism (see tutorial)

\*The plots were created employing python scripts but can be reproduced with any graphing tool using the values in the flat files