

We observe a trajectory

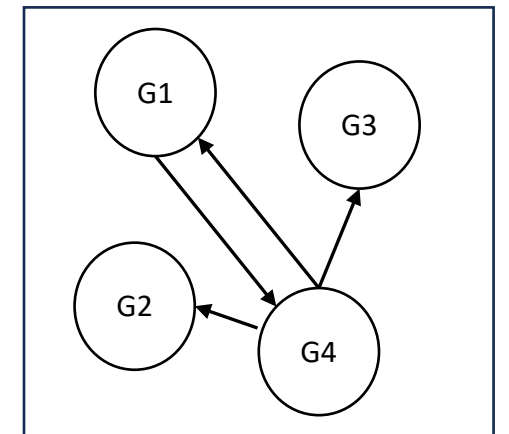
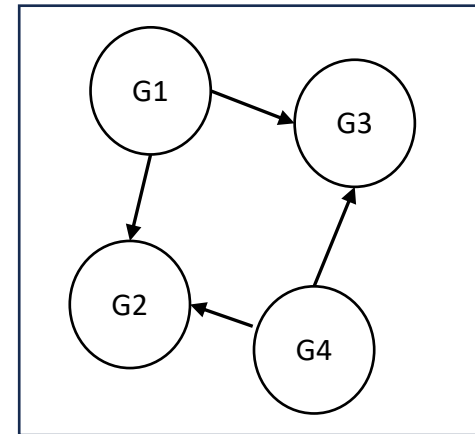
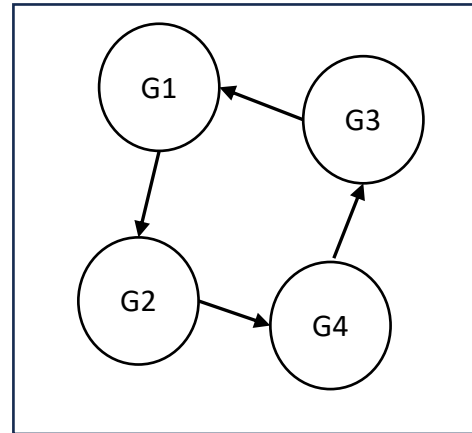
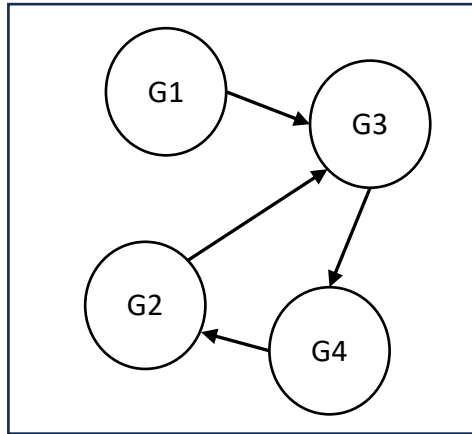
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0	1	1	1
1	1	1	1
1	1	1	0
1	0	1	0
1	0	1	1
0	0	1	1
0	0	0	1

G1 G2 G3 G4



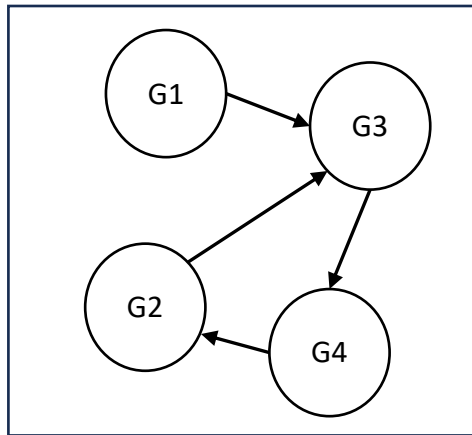
Time

We want to find a network model that generates the trajectory

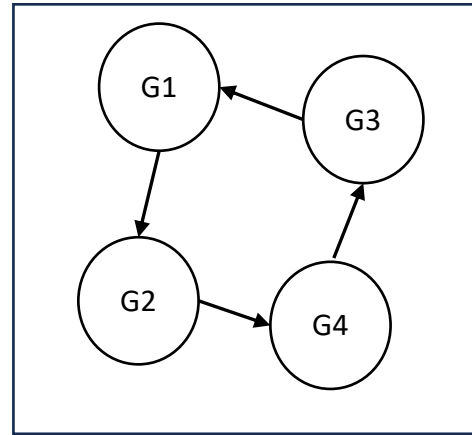


If we consider  $N$  networks, we need  $\log_2 N$  bits to encode them

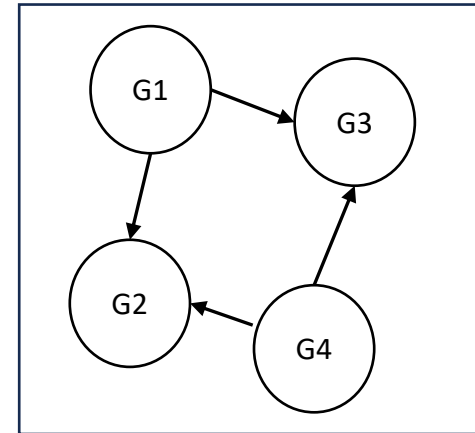
00



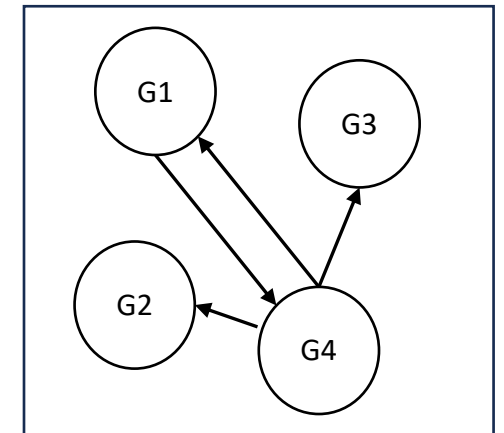
01



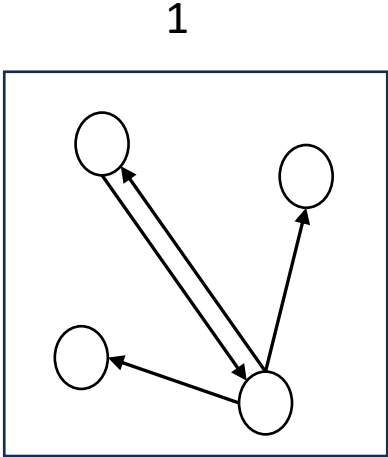
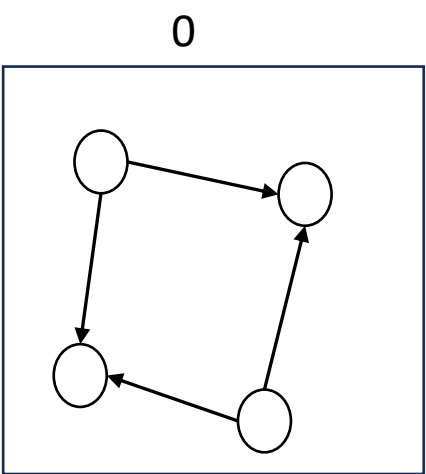
10



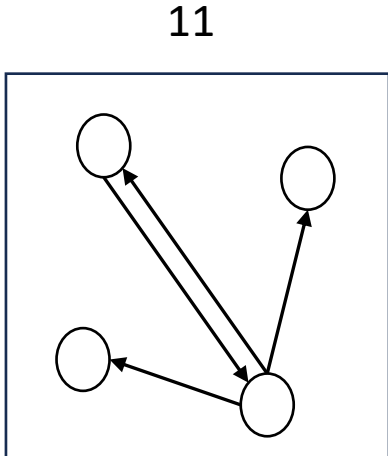
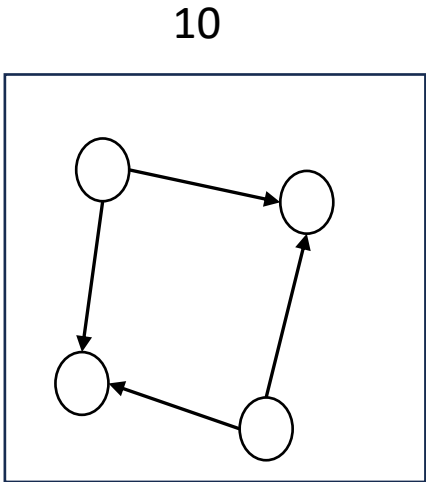
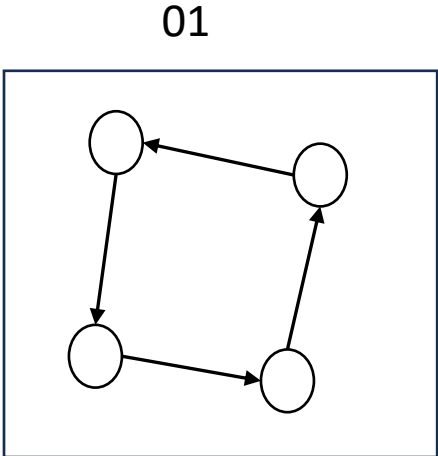
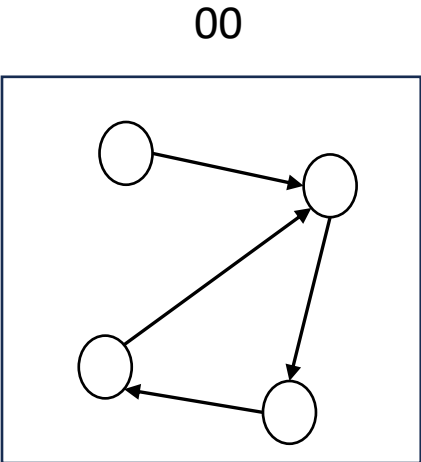
11



Each additional bit in the encoding doubles the number of networks, and the trajectories that they can generate/fit



1 bit



2 bits

Each bit in the trajectory that we allow to be a mismatch, also doubles the number of trajectories that our networks can generate/fit

1	1	1	0
1	<b>■</b>	1	0
1	0	1	1
0	0	1	1
0	0	0	1
G1	G2	G3	G4

↑  
Time

1	1	1	0
1	<b>0</b>	1	0
1	0	1	1
0	0	1	1
0	0	0	1
G1	G2	G3	G4

↑  
Time

1	1	1	0
1	<b>1</b>	1	0
1	0	1	1
0	0	1	1
0	0	0	1
G1	G2	G3	G4

↑  
Time

Consequently, the best fit minimizes the number of network bits and noise bits – it is the **Minimal Edit Distance** from a **State of Ignorance**