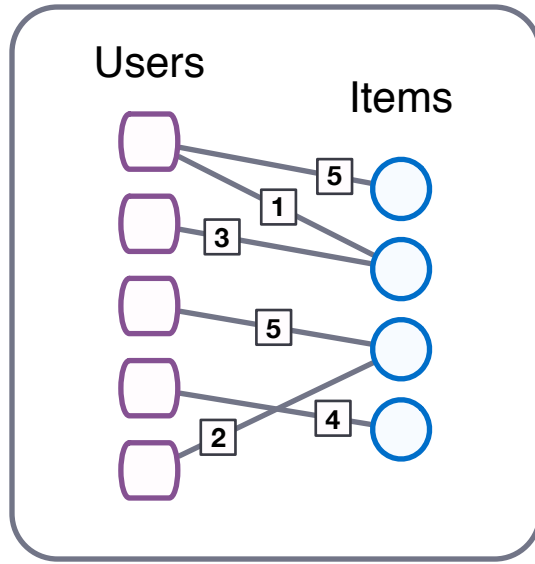


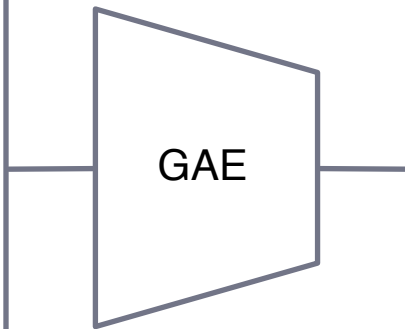
Users

Items				
5	1	0	0	
0	3	0	0	
0	0	5	0	
0	0	0	4	
0	0	2	0	

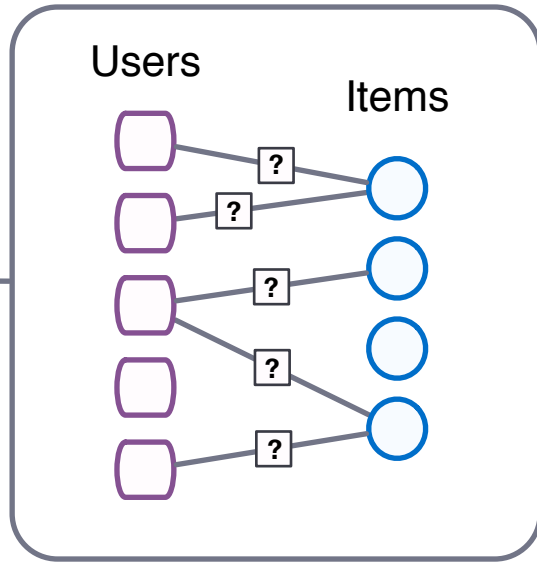
Rating matrix  $M$



Bipartite graph



Graph  
Auto-Encoder



Link prediction