

Figure 1: An HMM with 4 states which can emit 2 discrete symbols y_1 or y_2 . a_{ij} is the probability to transition from state s_i to state s_j . $b_j(y_k)$ is the probability to emit symbol y_k in state s_j . In this particular HMM, states can only reach themselves or the adjacent state.

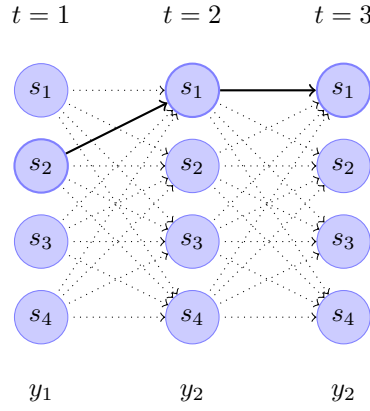


Figure 2: Trellis of the observation sequence y_1, y_2, y_2 for the above HMM. The thick arrows indicate the most probable transitions. As an example, the transition between state s_1 at time $t=2$ and state s_4 at time $t=3$ has probability $\alpha_2(1)a_{14}b_4(y_2)$, where $\alpha_t(i)$ is the probability to be in state s_i at time t .