

AI METHODS ASSIGNMENT 2

A The unobserved variables X_t are whether or not it's raining that day: R_t .

The observable variables are whether or not the director brings his umbrella: U_t

$$P(X_t | X_{t-1}) = \begin{bmatrix} 0,7 & 0,3 \\ 0,3 & 0,7 \end{bmatrix} X_{t-1}$$

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$$P(U_t | X_t) = \begin{bmatrix} 0,9 & 0 \\ 0 & 0,2 \end{bmatrix} X_t$$

Here we are assuming the weather stays the same with a 70% chance, and that the director brings his umbrella with a 90% chance if rain, else 20%

