

To run code:

1. Unpack zip
2. Have node installed
3. Navigate to project folder with terminal
4. run 'node nodeTask.js'

Part A

- X_t is the set of unobserved state variables at time t . The unobserved state variables in the umbrella domain is "Rain" and "Not rain".
- E_t is the set of observable evidence variables at time t . The observable state variables in the umbrella domain is "Umbrella" and "No umbrella".

Dynamic model:

R_{t-1}	$P_t(R)$
t	0.7
f	0.3

Observation model

R_t	$P(U)$
t	0.9
f	0.2

- The assumption made in this model is that: The current state depends on only a finite fixed number of previous states.

Part C - viterbi

The input of observations are: {Umbrella1 = true, Umbrella2 = true, Umbrella3 = false, Umbrella4 = true, Umbrella5 = true}.